STATE LIBRARY OF PENNSYLVANIA
3 0144 00414508 2

Digitized by the Internet Archive
in 2019 with funding from
This project is made possible by a grant from the Institute of Museum and Library Services as administered by the Pennsylvania Department of Education through the Office of Commonwealth Libraries

https://archive.org/details/vol1894annualrep00penn_0

# ANNUAL REPORT

OF THE

# SECRETARY OF INTERNAL AFFAIRS

OF THE

COMMONWEALTH OF PENNSYLVANIA.

PART III.

# INDUSTRIAL STATISTICS.

VOL XXII.

1894.

CLARENCE M. BUSCH,
STATE PRINTER OF PENNSYLVANIA.
1895.

P38.12
1.1
pt. 3
Cop. 2

# REPORT

OF THE

# BUREAU OF INDUSTRIAL STATISTICS.

COMMUNICATION.

Department of Internal Affairs,
Harrisburg, Pa., April 25, 1895.

To His Excellency, Daniel H. Hastings, Governor of the Commonwealth of Pennsylvania:

Sir: In compliance with the requirements of the Constitution, I have the honor to submit herewith, for transmission to the General Assembly, the Twenty-second annual report of the Bureau of Industrial Statistics, the same being part III of the reports of this Department.

I am very respectfully,
Your obedient servant,
ISAAC B. BROWN,
Secretary of Internal Affairs.

181913

## LETTER OF TRANSMITTAL.

Harrisburg, Pa., April 25, 1895.

Honorable Isaac B. Brown, Secretary of Internal Affairs of the Commonwealth of Pennsylvania:

Sir: I have the honor to present herewith the Twenty-second Annual Report of the Bureau of Industrial Statistics. The report deals with five topics, women in industry, building trades, strikes, manufacture of pig iron in Pennsylvania, and mine accidents.

Yours very respectfully,

ALBERT S. BOLLES,
Chief of Bureau.

# WOMEN IN INDUSTRY.

This is the first investigation concerning the employment of women ever undertaken by the Bureau. In 1888 the United States Commissioner of Labor investigated this subject in Philadelphia, but in no other city in the State. One of the interesting things concerning the employment of women is the extension of their field of industry. The time is not remote since their employment in this country was confined comparatively to few occupations, domestic service and factories. In recent years very many have been employed in stores and in counting rooms. Within the last six months they have been employed in one of the tin plate mills, that of the Monongahela Tin Plate Company, at Pittsburgh. In the tin plate mills of Wales women form a large part of the operating force. They have thus become competitors with men for work; indeed, in some employments they are willing to work for so much less that they have practically captured them. Doubtless, the time is not far off when they will largely supplant men in banking institutions, and, in short, in many employments in which muscular energy is not essential.

At the outset something may be said concerning the mode of obtaining returns. A blank was prepared for employes to fill and return to the Bureau by mail. A large number were thus filled, which did not pass under the eyes of employers. In other cases the blanks were left for distribution among the operatives in mills and stores One reason for doing so was the impossibility of obtaining names. When this could not be done, the only practical method seemed to be to leave the distribution of blanks to employers. The results of this mode of distribution were quite dissimilar. In some cases employers distributed the blanks to their employes with the request to fill them and make any additional remarks they pleased, assuring them that whatever might be said would not affect their positions. The Bureau, however, is in possession of evidence consisting of letters, showing that in many cases they did fear to give full answers as they would have done had they believed that the returns would not be seen by their employers. We regret to state that in other

cases employers did examine the returns, tearing up some of them, and in others requiring employes to change the figures of wages and in other regards. Again, employers did not always distribute the blanks to all of their employes, but principally to those who were paid the highest wages, thus trying to give a wrong impression concerning the remuneration paid to them. In a few cases the blanks were not distributed at all, but the employers kindly filled them out for their employes, adding in the way of a general remark in each case, "well pleased." The uniformity of the handwriting and also of this remark indicated clearly enough the authorship of the returns. This treatment of the blanks furnishes a strong reason for believing that the employes would have returned very different answers. A large number of letters were received from employes stating how their employers dealt with the blanks; how they distributed them; how they destroyed them; how in other cases they were amended either with or without the consent of those employed. But while this was true in several cases, let no one conclude that all were guilty of such things. Many employers, especially the larger firms, evinced the utmost willingness to have the inquiry fully and fairly conducted.

Extracts from some of the letters addressed to the chief of the Bureau are herewith presented:

March 9, 1895.

I am employed in a mill here and I write to inform you of the disposition of the blanks. They were carried about the mill by the manager and instead of being given to the actual workers they were given to managers, forewomen and instructors, who were directed to fill them up and give their occupations as "weavers." In some cases where girls who were given the blanks to fill and they were returned to the office, they were read by some one in authority and the girls who had filled up the space for remarks were sent for and severely reprimanded and in two cases they were discharged. I send this in confidence for if I was known as the writer I would also lose my place.

February 27, 1895.

I write in confidence to you as to the disposition that was made of the blanks sent to the mill here in which I am employed. The blanks were given only to the girls who received the highest wages, and they were very careful not to give them to girls who work for from two to three dollars per week, for that is all that the majority of the girls receive. There was a request on the blanks inviting us to make such remarks as would in our opinion improve our condition. Some of the girls were afraid to make any remarks, as the blanks had to pass through the hands of our superintendent, and I know that changes were made by him, notably in answer to the hours of work. We work ten and one-half hours a day, and on Saturdays seven and

one-half, and they instructed us to say that we worked ten hours. We only get a half hour at noon and we were instructed to say that we got a full hour. My foreman wished us to say that we got an annual vacation on application; that is not so, and so far from paying girls for time lost by sickness, a girl who is obliged to be absent through sickness is fortunate if she is taken back again when she recovers.

23d April, '95.

"It has come to our knowledge that one of the large dry goods firms in this city who employ fifty or more girls and women in their establishment, distributed only to about eight of that number the blanks sent to them by your department. We are interested in the welfare of women, especially saleswomen, and we would consider it an act of injustice to them if your department should not be informed of such proceedings. Furthermore, the firm requested those who received the blanks not to make any remarks in the space for such in the circular, and if any did make them, the envelopes should be returned to the office unsealed.

Such proceedings in our opinion not only handicaps your department in its efforts to compile statistics with the object of bettering the condition of laboring women, but they go to show that the firm in question are either ashamed of their treatment of the women who are in their employ or are opposed to anything which would tend to their advancement. We give you this information in confidence, as were names used, it might jeopardize the positions of some of the employes.

March 25, 1895.

I wish to inform you that in the shoe factory in this town where I am employed we were given the blanks you sent out, but we were not given the envelopes for them, and in some cases where the girls did seal them the foreman tore them open again and read what was written in them. The girls were ordered to fill them out with pencil and when he read them he made them rub out what did not suit him and they were further instructed to say that they did not pay board at home. They were also ordered not to put anything in the "remarks."

January 16, 1895.

During the past week the girls and women in the store here where I am employed received blanks to be filled in regard to our labor and condition. We were, in a manner, constrained from putting in anything under the head of "remarks," as we had reason to believe that the blanks were read by those in authority. We were also instructed not to state the wages we received, and so I have have taken the liberty of writing privately to you to inform you of this state of affairs.

March 1, 1895.

In the factory in this town where I work there are about 150 women employed and there were only fifty-two blanks given out and those were given to the girls and women who make the largest wages. We had no envelopes given us, and when the blanks were filled they were taken to the office and any that did not please the boss were not sent. So I think that there will be very little in them under the head of "remarks."

Nearly three thousand returns have been obtained, mainly from the larger cities in the State. A very different condition of things prevails in different places, both in the mode of treatment of employes and also in the rates of wages paid. Generally, it may be said that employes receive a better remuneration in the east than in the west, and are also treated with more consideration.

One of the facts disclosed by the inquiry was a violation of the law requiring seats for employes to be used when not actively engaged. The law provides that:

"Every person, firm, association, individual, partnership or corporation employing female employes in any manufacturing, mechanical or mercantile establishment in this State, shall provide suitable seats for the use of the female employes so employed, and shall permit the use of such by them when they are not necessarily engaged in the active duties for which they are employed.

"Any person, firm, association, individual, partnership or corporation violating any of the provisions of this act, shall, upon conviction thereof before any magistrate, alderman or justice of the peace, be sentenced to pay a fine of not less than twenty-five nor more than fifty dollars, to be paid into the treasury of the proper county, and costs for each offense, and any failure to pay the same shall be committed to the proper jail until discharged according to law."

This law appears to be entirely disregarded in some stores, while in others it is observed in the letter and broken in the spirit, as while chairs or seats are furnished, there is an objection to the use of them by employes, even when not engaged. In other words, if the women did use them, they were duly informed that they were no longer needed. The law is just and should be regarded, but there seems to be no mode of enforcing it effectively. Evidently it is one of those regulations which must depend upon the conscience of the employer. The addition of a penalty for non-compliance is not effective. On the other hand, it would be quite impossible for policemen or others to exercise any supervision over employers. The chief remedy must be public opinion. If it were known what stores were inclined to disregard the law, so just in every respect, probably they would be less

patronized and the diminution of trade, if known to spring from this cause, would doubtless prove an effective remedy. The profit and loss argument would be very effective if it could be used; and it may be that publicity in regard to the treatment of employes in this respect is the needful measure to bring about a better state of things.

The returns show that in some cases women receive very low wages, and especially in the stores and mills. Employers assert, whenever inquiry is made of them on this point, that they are quite well aware of the low remuneration paid, but that it would be easy to find others at still lower rates. They declare that the reason for the low rates is the superabundance of persons offering to work, and this unquestionably is the chief reason for the low wages that prevail. There is a tendency, and a very marked one on the part of girls to crowd into the stores whatever may be the remuneration. One may inquire, what are the reasons that lead them to do so? Can no better remuneration be obtained elsewhere? Comparisons are often made between employment in stores and domestic service. It is said that girls could obtain much higher wages in domestic service, live a more independent life, and if they were faithful would be better cared for in case of sickness, etc., and, on the whole, would greatly improve their condition. It is well known that English girls are largely employed in domestic service in England. Why does not the same condition of things prevail here? It is said in reply to this that notwithstanding the low wages paid in stores the occupation is preferable to domestic service, that there is less drudgery in it, and that in many respects there are compensations for the low wages.

The returns show a marked disparity in the rates paid in various places, especially in the stores west of the Alleghenies, as compared with those paid in the eastern part of the State. What is the reason for this? Probably there is no greater surfeit of labor in the west than in the east; if so, the difference must be ascribed to a disposition on the part of eastern employers to pay more.

Another interesting point, to which we have already referred, is the competition between men and women for employment. One cannot help observing the displacement of men by women in many employments. In a few years doubtless many will be employed in banking institutions, trust companies and in counting rooms, and probably in all places in which mental labor, or very light physical labor is required. In teaching, the division continues, but the tendency is toward the employment of more women as teachers. Thus the change is going on everywhere. There are several reasons for this. One is because women are willing to work for lower wages. This is the principal reason for the change of late years, as every one knows that the tendency of the times is to diminish expenditures. All prices are tending downward, and therefore employers must study

the cost of production. One of the items is that of labor. How can it be lessened, both in quantity and in remuneration? This is effected partly by the introduction of more labor-saving machinery and partly by dispensing with persons who are paid the highest wages. Women are ready to invade the ranks once filled by men and accept lower wages. It should also be said that in cases of trust especially they have proved to be, on the average, more trustworthy than men, and this is another reason for employing them in places of responsibility.

With these remarks concerning the subject in general we may turn to the treatment of employes in some particular cases. First of all, mention may be made of the firm of Strawbridge & Clothier, of Philadelphia. In getting returns every possible opportunity was given. In seeking information relative to the employment of women, one of the collectors connected with this department was particularly impressed with the facilities for comfort, rest and recreation furnished by the firm of Strawbridge & Clothier, of Philadelphia, to their female employes, and it has been deemed expedient to give a brief history of their system, in the hope that other large firms may be led to adopt it. All the women in the employ of this firm, from whom information has been obtained, either verbally by the collector, or on the blanks furnished for that purpose, speak in highly commendable terms of the system, and we believe it works to the mutual advantage of employer and employe. This firm has set apart space about two hundred feet square on the top floor of their building at Eighth and Market streets, and fitted it up at considerable expense into a reading and writing room, a library filled with choice books and the leading periodicals and daily newspapers, and a sitting room furnished with easy chairs, rockers and couches. The rooms are handsomely carpeted and present a cheerful and homelike appearance. There are also toilet rooms supplied with the latest improved sanitary appliances, and a dining room where the women are enabled to eat their luncheons with as much comfort as though they were at home. There are steam-heating tables in the kitchen attached to the dining room on which food can be heated, if desired, and ice chests where food of a perishable nature can be kept in summer time until used. Dishes of every description are furnished and kept clean at the expense of the firm. Several women are hired especially for this purpose, and are on duty at all times of the day. The coffee, tea, milk and sugar used by the employes at luncheon are furnished free of cost. We might also add that a chest supplied with medicines of every description is kept in the sitting room for the use of any of the female employes, and a carriage is kept in waiting to remove to their homes those who may be taken sick while in the discharge of their duties and who are unable to get home in any other way. The department just described is under the management of a housekeeper and several

assistants who are paid by the firm, and who keep everything scrupulously neat and clean. Each woman in the employ of this firm is allowed forty-five minutes for luncheon and rest, and as she can easily eat her luncheon in half an hour, she can occupy the balance of the time as she may desire, in reading, writing or resting.

This plan seems to give universal satisfaction to the employes. We might give the testimony of hundreds from whom information had been received, but as it is all of the same tenor, we merely quote the opinion of one woman, who says: "In fact, I do not think more could be done for our comfort, as I can say that for almost seventeen years I have been very happy here, and I think I voice the sentiment of all the women employes when I say that no other house in Philadelphia does so much for their employes as Strawbridge & Clothier."

The firm has also in operation a relief association which is highly commended by many of the employes who have returned blanks to this Department. We give a brief history of the association, with the by-laws governing it.

The Strawbridge & Clothier Relief Association was organized in January, 1880, and the fifteen years of its existence have been years of wonderful success. It object is the relief of any member who shall be detained from business on account of sickness, disability or accident, and the raising of a benefit fund in case of the death of a member.

Its membership is composed solely of employes of Strawbridge & Clothier, and it is officered and controlled, or managed, entirely by them. Membership is entirely voluntary, any one can join or withdraw at any time.

No medical examination is required in order to become a member, but simply the payment of the nominal entrance fee of 50 cents and the approval of the committee on membership. When a member is physically unable to attend to business, he or she receives the sum of $5.00 per week for a period not exceeding fifteen weeks in any one year. Upon the death of a member the sum of $100 is paid to the legal heirs or whomsoever may have been designated.

The average cost to each member has been less than $3.00 per year, as the printed statements will show. This sum is collected by assessments of 25 cents each, and when $3.00 is distributed over an entire year the tax is scarcely felt. This exceptionally cheap rate is secured through the liberality of the firm, which turns over to the association certain sums per year, which greatly aid in reducing the number of assessments.

Last year the association paid in sick benefits $3,630.00 and $900.00 on account of deaths, and received from the firm the sum of $2,000. The following are the results of the fifteen years' work:

| | |
|---|---|
| Received from Strawbridge & Clothier, | $22,401 00 |
| Received from assessments, new members, etc. | 24,007 19 |
| Amount paid sick benefits, | 37,355 00 |
| Amount paid death claims, | 5,980 00 |
| Amount paid, expenses, | 2,144 00 |
| Total amount paid out, | $45,478 00 |

The following are the by-laws of the Strawbridge & Clothier Relief Association:

Objects.—This association has for its objects the relief of any member who shall be detained from business on account of sickness, disability, or accident, and the raising of a benefit fund in case of the death of a member.

Meetings.—Section 1. The annual meeting of this association shall be held in January of each year, for the transaction of general business. Special meetings shall be called by the president upon the written request of seven members of the association, stating the reason for same; and no business shall be transacted at these meetings other than that for which the meeting was called. The time and place of meeting shall be designated by the president.

Sec. 2. The chairman of the annual meeting shall preside by invitation of the board of managers and need not necessarily be a member of the association.

Membership.—Section 1. The members of this association shall consist of employes of Strawbridge & Clothier (except cash-boys), provided that they shall have been in the employ of the firm not less than two weeks.

Sec. 2. Applications for membership shall be made to the secretary on the blank forms provided for that purpose; shall state name and residence and the department in which applicant is employed, and shall be accompanied by an admission fee of fifty cents. This application shall be submitted to the board of managers for action thereon.

Applicants may designate in their application, or at any time thereafter, in writing to whom death benefits are to be paid.

Officers.—The officers of this association shall consist of a president, vice president, secretary, treasurer and nine managers (four ladies and five gentlemen), five of whom shall constitute a quorum, and shall be elected by ballot annually, at the stated meeting in January. The persons receiving the highest number of votes cast shall be declared elected, and shall constitute the board of managers, to serve until their successors are chosen.

Duties of Officers.—President—The president shall preside at all

meetings of the board of managers and special meetings of the association, sign all orders on the treasurer when properly attested, have power to order all assessments, appoint all committees not otherwise provided for, and perform such other duties as the association in their by-laws may enjoin on him. In the absence of the president, these duties shall devolve upon the vice president.

Secretary.—The secretary shall keep correct minutes of all the proceedings of the association and board of managers; notify members of all assessments, receive all returns from same; pay promptly to the treasurer all moneys received, taking his receipt therefor; shall keep such a record of admissions and withdrawals as will show at all times the actual membership of the association; present to the board of managers, or its committees, al physicians' certificates, reports of committees and the names of all who have failed to pay their assessments, with their reasons, if any; shall draw and attest all orders upon the treasurer, and perform such other duties as may be required of him. For the performance of these duties, he shall receive such compensation as the board of managers may, from time to time, determine upon.

Treasurer.—Section 1. The treasurer shall take charge of all the funds of the association; pay orders only upon the order of the president, attested by the secretary; keep a full and correct account of all receipts and expenditures; shall notify the secretary when the condition of the treasury requires an assessment; shall present a monthly report to the board of managers of the condition of the treasury, and an annual report at the stated meeting of the association.

Sec. 2. He shall give security for the faithful performance of his duties, in such sum as shall be determined upon by the board of managers at their first meeting after the annual election.

Board of Managers.—Section 1. The board of managers shall have a general supervision of the association. They shall meet upon the first Monday of each and every month to receive the reports of the secretary, treasurer and committees.

Sec. 2. A relief committee, composed of three of their number (including the secretary), shall be appointed by the board at their first meeting after the annual election, whose duty it shall be to act upon all applications for relief and payment of benefits, and who shall meet at least once a week. They shall be authorized to employ a physician when, in their judgment, it is necessary.

Sec. 3. All vacancies shall be filled by the board, and any member absent for three successive meetings (unless by reason of sickness or some unavoidable cause) shall forfeit his or her right as manager, and the board may declare a vacancy and fill the same.

Sec. 4. Should any officer or member of the board, from any cause,

fail to perform his duties satisfactorily to the board of managers, he may be removed and his successor appointed by a two-thirds vote of the same.

Assessments.—Section 1. Every member of this association shall pay an assessment of twenty-five cents upon the call of the secretary, whenever the funds in the treasury are reduced to one hundred (100) dollars, said assessment to be paid within one week from date of call. Any member failing to pay within that period shall be considered a delinquent, and not be accounted a member of the association, unless re-admitted in the usual form, or by special act of the board of managers.

Sec. 2. Members absent from the store when an assessment is called, will have their notices mailed to the last address furnished the secretary, and this shall constitute a notice of said assessment.

Sec. 3. Any member away from the store on a vacation when an assessment is called shall be excused, if payment of such assessment is made upon returning to store.

Benefits.—Section 1. Any member unable, by reason of sickness or accident, to attend to his or her duties at the store, shall notify the secretary, in writing within one week after the occurrence of the disabling cause, stating the nature of the disability, and furnishing name and residence. A failure to notify within the specified time shall debar the applicant from more than one week's benefits prior to date of notification, unless an excuse for such delay be furnished, which shall, in the judgment of the board of managers, be sufficient reason for the same. Upon receipt of the application the secretary shall notify a visiting committee, whose report he shall lay before the relief committee, and, upon approval, said member shall be entitled to receive benefits as follows:

The sum of five dollars per week, payable weekly; no benefits to be allowed for less than one week's illness, nor for a longer period than fifteen weeks in any one year, beginning said year with date of first week's benefits.

In case any member should be absent more than one week, and it should be reported to the board of managers or the secretary in writing, by any member, that he or she is sick, the board of managers shall investigate the case, and if it is proven to their satisfaction, after a report from the visiting committee, that the member is entitled to benefits, the same shall be forwarded to him or her as though the notice had been personally given.

No one shall be entitled to sick benefits until he or she has been a member of the association two weeks.

Sec. 2. Members applying for benefits shall furnish a physician's certificate weekly, unless excused by the relief committee.

Sec. 3. On the death of a member an assessment shall be called at

once, and, upon satisfactory proof of said death being furnished to the secretary, the sum of one hundred dollars shall be drawn from the treasury and paid immediately to whomsoever the applicant may have designated.

Sec. 4. Any assessment called during the illness of a member shall be deducted from the amount due.

Sec. 5. Any employe who has not reported for duty at the store for the space of one year, shall cease to be a member of the association.

Sec. 6. Any member receiving benefits from this association who may be found imposing thereon by feigning sickness or disability, shall be expelled by the board of managers and shall not be re-admitted to membership.

Visiting Committee.—The visiting committee shall be selected by the secretary, and consist of one or more members, at his discretion. Their duty shall be to visit all applicants at least once a week during their illness, and report to the secretary (upon blanks furnished by him) the condition of said applicant, and his or her right to receive benefits.

Collectors.—Section 1. The board of managers shall, at their meeting in January, and annually thereafter, appoint twenty members of the association selected from the various departments, to collect assessments and hand same to secreatry.

Sec. 2. It shall be the duty of collectors to present assessment notices promptly, and in the event of any remaining unpaid on the last payable day, they shall call the attention of the members to the fact; the names of all delinquents, with their reasons, if any, to be reported to the secretary.

Expenses.—All necessary expenses shall be defrayed by the association upon the order of the board of managers.

Another plan that may be mentioned is John Wanamaker's. At first it encountered considerable opposition, but which has almost wholly disappeared. Formerly employes were constantly solicited for money to aid employes who were sick or otherwise disabled from attending to their duties; or where an employe died, to create a fund for the purpose of burial, or to aid the family of the deceased. These solicitations were frequent and often caused unpleasant results in consequence of the varying spirit of willingness or unwillingness to contribute. So this association was formed for the purpose of raising contributions in a systematic manner. Its superiority is so evident, and the certainty of relief and the sum that will be forthcoming, that an abolition of the system would be a long step backward in the way of administering effective relief.

It provides that all persons, employes of John Wanamaker, directly connected with his business house, shall be members of this as

sociation, which membership shall continue during the entire period of their employment by the said John Wanamaker. But upon the termination or ending of such service or employment, be it by resignation, discharge or otherwise, their membership in this association shall cease and end, and they shall forfeit all rights or benefits therein accruing by reason of such membership.

It shall be necessary for all employes to be actually in the service of John Wanamaker three full months before they can become eligible to sick or death benefits; and one month's assessment, payable in advance, before the expiration of the three months aforesaid, shall be made, in order to become beneficial in this association. But if during the three months' term of service, or immediately at the close thereof, the member should cease to be an employe of John Wanamaker, the advance assessment paid under this constitution will be refunded to the retiring employe.

Any employe of John Wanamaker who shall be absent for three consecutive months shall forfeit his or her right of membership in this association, and shall not be eligible to either sick or death benefits after that period.

If at any time it shall be the pleasure of the firm to reinstate a discharged employe, such person so reinstated shall be restored to the same rights and entitled to all benefits and privileges such person had in this association at the time of his or her discharge, and such person so reinstated shall not be obliged to again sign this constitution.

The membership shall be divided into three sections: The first section shall consist of those who are in receipt of a weekly salary of $2.50 or less; the second section shall consist of those who are in receipt of a weekly salary of more than $2.50 and not more than $5.00; the third section shall consist of those who are in receipt of a weekly salary of more than $5.00.

Officers.—The officers of this association shall be a president, vice president, secretary, treasurer, and six directors, who, together with one member of the firm, shall constitute a board of directors.

The said officers shall be elected annually by ballot, by the heads of all the departments, (each acting as the representative of the people in such department), on the second Tuesday of February in each year hereafter, and shall hold office until their successors are duly qualified.

Immediately upon the adoption of this constitution there shall be an election of officers.

Immediately after the above-named election the directors shall be divided by lot into classes of two each. Those of the first class shall continue in office until the annual election of 1884; those of the second class until the annual election of 1885, and those of the third

class until the annual election of 1886, and there shall be annually thereafter two directors elected to serve three years, to succeed those whose terms of office shall expire.

In case any of said offices shall become vacant, from any cause, the board of directors are authorized to fill such vacancy until the ensuing annual election, when the vacancy shall be regularly filled for the unexpired term.

Duties of Officers.—The President. It shall be the duty of the president to preside at all meetings of the association or of the board of directors; to call special meetings at the request of three members of the board; to sign all orders on the treasurer, and to perform such duties as appertain to this position.

The Vice President. It shall be the duty of the vice president to perform the duties of the president in his absence.

The Secretary. It shall be the duty of the secretary to be present at all meetings, keep a correct record of the proceedings, attend to all correspondence, keep a list of the employes, and record all accessions and dismissals; to keep a list of all members applying for benefits, and to note the circumstances of each case; to make out all orders to be drawn upon the treasury; to report to the board of directors, whenever called upon, the condition of the association, and to perform such other duties as may be provided herein, or such as may be indicated by the board of directors. He or she shall, before assuming the duties of office, duly execute a bond, with security, approved by the Board, for the fulfillment of his or her duties, in such sum as the board may from time to time determine, and for the performance of these duties shall receive an annual salary approved by the firm.

The Treasurer. It shall be the duty of the treasurer to collect from the cashier of the firm the assessments as they may be levied, and to give a receipt for the same; to pay out of the funds in the treasury all sums authorized by the board of directors; to report to the board whenever called upon, the condition of the finances of the association, and to perform such duties as may be provided for herein, or such as may be from time to time indicated by the board. The books shall be at all times open for the inspection of the board. He or she shall hand over the property of the association to his or her successor. He or she shall before assuming the duties of the office, duly execute a bond, with security, approved by the board, for the faithful performance of his or her duties, in such sum as the board may from time to time determine.

The Board of Directors. The board of directors shall have general oversight of the business of the association, and the officers of the association shall at all times be subject to its control. It is specially authorized to decide finally all disputed claims for benefits; to grant

special relief when occasion demands it; to employ physicians, nurses or other outside help, and provide for their remuneration in its discretion; to increase the funds of the association by additional assessments or otherwise; and no assessments beyond the regular monthly dues, shall be made without the express authority of the board. It shall meet at such times as it may provide, and at all meetings five members shall constitute a quorum for the transaction of business. The period wherein death benefits can be allowed shall not in any case exceed one year from date of sick notice, the sickness to be continuous until death, and to have been contracted while in the service of the house, provided the beneficiary at the end of three months signifies willingness that assessments be paid through a second three months, and this to take away the discretionary power as to the matter of death benefits from the board of directors. Five per cent. of all assessments shall be set aside as a "provident fund," to be applied in cases of illness where the usual ten (10) consecutive weeks may be deemed insufficient, such special benefits to require a two-thirds (2-3) vote of the board of directors.

Dues, Assessments and Benefits.—The monthly dues of each member of the first section shall be five cents; of each member of the second section, fifteen cents, and of each member of the third section thirty cents. The assessment in case of death shall be from members of the first class, three cents, from members of the second class five cents; from members of the third class, ten cents.

All dues and assessments shall be deducted in the pay office of the firm, from the salary check of each member, and by it paid over to the treasurer of the association.

Any member who shall be unable by reason of providential illness or accident, to follow any occupation for the space of one week or more, shall be entitled to benefits for a period not exceeding ten consecutive weeks; if a member of the first section, at the rate of $1.50 a week; if a member of the second section at the rate of $2.50 a week; and if a member of third section, at the rate of $5.00 a week. But for the first week only half benefits shall be paid, and no member shall be entitled to benefits for more than thirteen weeks in any current twelve months.

In case of illness or accident, it is the imperative duty of the member to notify the association immediately, by sending the notice direct to the secretary. Benefits will not be granted unless notice is given; and in no case will benefits be allowed anterior to the time of giving the required notification, except by a majority vote of the board of directors.

In case of the death of any member the treasurer shall pay to the legal representatives of the deceased, upon the order of the board of directors, if a member of the first section, the sum of $50.00; if a

member of the second section, the sum of $100.00; and if a member of the third section, the sum of $200.00.

Another institution that has done much for women in Philadelphia in providing a home for them at reasonable rates, etc., is the Women's Christian Association, and it may be properly described in this report.

*History and Methods of the Women's Christian Association of Philadelphia in Caring for and Obtaining Employment for Women.*

When the Women's Christian Association of Philadelphia was organized in December, 1870, working girls' clubs, cheap restaurants suitable for women, inexpensive boarding homes, and the various helps to moral and intellectual stimulus now blossoming from churches and guilds, were unheard of. To fill a very specific need in an unoccupied field some women of Philadelphia were led to form a Women's Christian Association with this as their object: "The Physical, Mental, Moral and Religious Welfare of Young, Self-supporting Women."

First of all they opened a boarding house at 1605 Filbert street where fifty girls could be accommodated. The purpose of this home was to give board, lodging, motherly protection and Christian care to working women under twenty-five years of age; the rates of board, including laundry work, $3.00, $3.50 or $4.00 a week. The home was self-supporting.

Girls who must live on small salaries are ever with us in the great cities. The struggle for existence is severe; temptations abound; where there is no natural protector to guard and guide, the W. C. A. stands ready to shelter and protect.

Hosts of girls cannot afford to spend much on their food. Dining rooms in large stores for use of employes are a very recent invention. In 1871 girls were found suffering from lack of means to obtain suitable dinners, and the restaurant was established at 141 North Seventh street, providing nourishing, well-cooked food, cheap and good, for the use of any self-supporting woman. Such a supply met with a demand that has grown steadily every year. Meantime, in the restaurant the motherly eye of the association kept awake to the opportunity here and there afforded to extend friendly help and counsel, with results which appear in no written records, but are engraven on hearts passed beyond the storm and stress of youth.

In these two houses the Women's Christian Association steadily developed as the call for fresh work was heard. To increase the facility for carrying on the several departments to be hereafter enumerated, and as a measure of economy, in 1884 the two buildings were vacated and the Association concentrated its city work under one

roof, at 1117-1119 Arch, purchased and altered for that purpose. The construction of the building of the Reading Terminal Company destroyed this building in 1891, and the W. C. A., after an episode of rented houses and partial suspension of some of its work, in November, 1893, took possession of its present quarters at Eighteenth and Arch. This eight-story building was carefully planned by Benjamin D. Price, architect, in conjunction with the president and certain managers. It is known throughout the country as the model W. C. A. building, and is, as yet, the largest ever built for this purpose.

The working force of the Women's Christian Association lies in its board of managers, comprised of I: Officers—A president, six vice presidents, three secretaries, two treasurers; II, Representatives from evangelical churches, five from each, the limit, who, after acceptance of the invitation to join, are elected managers at the monthly meetings of the board. From these members are formed committees who control the work of the departments. Managers are also collectors for the association. The service rendered by every officer and manager is voluntary.

The present building contains 328 rooms, of which 269 are sleeping apartments. Toilet rooms are provided on seven floors; twenty-one bath rooms are free to the residents.

Boarding Department can accommodate 250. Its bedrooms are furnished alike, in oak; a single bed or two single beds or a double bed; a table, washstand, chair and rocker for each person; also a roomy closet. No trunks are taken to the bed-rooms. On the ninth floor, a large room was built communicating by a lift with the basement, in which room the trunks are stored and can readily be opened by their owners. By a system of checks each trunk is delivered to its owner on her departure and duly receipted for by her.

The price of board includes food, lodging, light, heat and one dozen pieces washed weekly. A completely equipped laundry in the basement serves for the whole house. Single rooms at $3.00 a week have one window opening into a large central area. The occupant using her room mostly at night finds it as light with electric light as any other in the building. The outlook of the double, $3.00 apiece, rooms is rather more desirable, and the interior larger. $3.50 a week, some in double rooms, give certain advantages in situation and size. $4.00, $4.50, $5.00, both single and double rooms, and $6.00 single, have one or two windows each opening on the street. The size and position causes variation in price.

Let us now suppose a young Protestant woman, either supporting herself or fitting herself to do so, wishes to enter the boarding department. Her application is made upon a printed form giving name, home address, address in case of accident, sickness or death, occupation, where employed, denominational preference, two refer-

ees. If her references are satisfactory, and if she is deprived through absence or any other cause of her parents' or guardian's protection, she is duly admitted. The admission committee meets on Friday at three P. M., and every name passes before it when in session. As its resident representative stands the housemother, who acts in the interim and keeps a motherly oversight of her large flock, gathering with them every evening for family prayers. Out of the personal acquaintance formed by the members of the committee with the boarders a warm, friendly feeling is often established, and the new year gatherings of the W. C. A. family evoke a union of interests and a happy fellowship.

Each boarder is entered on her own merits. Her salary may not be so small as to necessitate these prices, but the greater need of home protection may be imperative. The new boarder receives as a greeting a letter of welcome containing a notice of the services held in the house, and the desirability of attending them. Mention also is made of the library, the use of the house by friends and other matters.

Tacked on her door she finds the following regulations:

Applications for admission may be made to the housemother, and by her referred to the admission committee. Satisfactory testimonials of character will be required.

Payment for board and lodging must be made invariably in advance to the housemother. No food must be taken from the table. In cases of illness it will be ordered by the housemother.

Rooms will be well aired every morning and kept in all respects neat by the occupants, who are expected to make their beds Sunday mornings. All rubbish must be placed in waste baskets which will be emptied by the chambermaid, and nothing must be thrown from the windows. Burnt matches, hair or rubbish of any kind must not be thrown into the water closets or sinks. All are strictly prohibited from defacing walls by nails, tacks, pins, mucilage, matches or otherwise. In case of violation of this rule an assessment will be made for damages.

Each permanent boarder will be allowed two weeks' vacation each year, and her room will be retained for her. If absent a week or more at any other time, she must pay for her laundry work, and half board if the room be retained.

Each permanent boarder is allowed one dozen plain, unstarched pieces of washing a week, which must be distinctly marked with the owner's name, or charge will be made for them. Each boarder must provide herself with a washable bag, in which her clothes can be carried to and from the laundry. Printed wash slips will be furnished and must accompany each bag. No clothes will be received after Monday morning, and no clothing is to be washed or dried in the rooms. Boarders are not allowed to visit the laundry or kitchen.

Family worship is held each evening directly after dinner, and on Sunday morning to which all are cordially invited. A list of pews in churches of various denominations, for the free use of the family, is

placed in the front halls. All are affectionately urged to attend church at least once on the Sabbath.

The house will be closed promptly at 11 p. m. Permission to be out later than the time specified must be obtained from the housemother. Any one expecting to remain away from home over night must mention the fact to the housemother.

All visitors are to be received in the parlor, no visitors being allowed in any other part of the house without special permission from the housemother.

Occupants of rooms are desired on leaving them to lock the doors and leave the keys at the office. In case of loss of room, or closet door, or bureau key, twenty-five cents will be charged. Money and valuables at the owner's risk, except when left in the care of the housemother.

Each boarder will be allowed one trunk only, which must be distinctly marked with the name of the owner. Trunks will be taken, on arrival, to the trunk room, where they can be unpacked.

Meals are served in a dining room appropriated solely for the boarders. By notifying the matron, those who cannot return at midday are provided with a light lunch to carry with them.

Even with so large a family the home element is successfully fostered. One large room on the second floor, well lighted by day and night, is filled with the boarders' sewing machines, and here they are busy sewing for themselves or for their customers. (Fitting of custom work is done at the patron's home, not in this building.) An adjoining room is for readers who wish to be quiet. In two parlors on the first floor, made attractive by many gifts, friends of both sexes are entertained. A large amusement room in the basement is devoted to piano practice, calisthenic exercises, candy pulls, corn popping and any other harmless diversion. A portion of the roof, finished in cement, adorned with flowering plants and lighted by electricity, shares with the yard as a pleasant out-door retreat in mild weather.

Do you ask the personnel of our boarders? They come from all over the world, even from South Africa. They represent all sorts of trades and callings; and salaries from $3.50 to $12.00 a week. The girl who earns but $3.50 a week frequently has her board eked out by her family. There are times when a hopeless debt is expunged from the books of the admission committee.

During the first year in this building many came from curiosity, expecting to find perfection. Needless to say, they found it not. Farmer's daughters take situations in stores for the winter months and then return home. The country milliners follow them, coming up to town to serve in their trade during March and April, gain fresh ideas for their customers and stock for their little shops, doing the same again in the autumn. Art students from the country come

to study during the winter to perfect themselves for teaching. One of these, who spent six winters with the W. C. A., has received a scholarship entitling her to a course of study in Paris. Sometimes our girls take up service in families when summer work is slack.

So much for the birds of passage. On the other hand, young women having steady employment the year round make this their permanent home, retaining their rooms throughout the short vacation.

The Association family is not exempt from the "seamy" side inevitable to all life's experiences; but the difficulties encountered, more or less serious, never pass beyond the knowledge of the two or three in committee. Equally sacred from publicity is held the exercise of a practical benevolence which supplies material needs. Yet a report of the Women's Christian Association is incomplete with no allusion to its philanthropic essence. No more than to maintain silence regarding the constant, loving care over the unfolding of the spiritual life of our girls, to some of whom this solicitude marks their first contact with truly Christian people.

The Sunday afternoon Bible class is attended by boarders, also young women living elsewhere, its object being to draw in those who have no church home.

Transient Department.—Not every woman needs a permanent home, but many a one is helplessly adrift in a large city when she requires shelter and has little or no money to pay for it. Transient lodging, respectable, and at twenty-five cents a night, is a saving grace to such, and the ability to obtain it under the W. C. A. roof did not tarry long after the Association possessed a local habitation. The present accommodation for transients is nineteen beds at twenty-five cents; twenty at fifty cents a night. These rooms are on two corridors of the rear wings of the house. They are comfortably furnished from our former home, or by gifts, or by purchase of new furniture. A large closet is filled with cots and bedding to be drawn out in case of need, so that if the rooms should be be full no one applying need be refused shelter.

Vacancies in the boarding department are at the disposal of transient guests, who pay $1.00 a night, or 75 cents each when two occupy a room. The transient matron arranges for the rooms and looks after the comfort of the guests of her department. A woman patrols the house all night and receives any belated traveler. No notice of arrival is necessary; while it is possible to engage a room in advance, if an applicant on the spot requires the room it will not be held vacant. Special provision is made for storage of trunks. Meals can be obtained in the restaurant in the house, if desired.

During 1894, 9,548 lodgings were furnished. Some of these represent women thrown out of work, thankful for a respectable, cheap lodging, and the opportunity to find employment all under one roof.

Sometimes it is the foreigner sent hither through the Traveler's Aid of another city, with no friends and but little money, en route to her destination.

The restaurant on the eighth floor is reached by two elevators. It occupies the whole front on Eighteenth street. The north corner of the room, under the tower, is furnished with comfortable seats and supplied with reading matter for use of patrons wishing to rest awhile.

Any woman is at liberty to use the restaurant; no restriction of class or creed. The bill of fare includes a variety of soups, fish, roast and boiled meats, vegtables, puddings, pies, fruit, bread, eggs cooked to order, tea, coffee, chocolate and milk, at prices for one dish, 1, 2, 3, 4, 5, 7, 8 or 10 cents. Breakfast is served from 7 to 8 A. M. Dinner 12 to 2.30, and supper 6 to 7 P. M. No outside custom served on Sunday.

The kitchen, with the restaurant on one side and dining room on the other, each capable of seating 250, is planned to supply both dining room and restaurant independently and with despatch. It is presided over by a matron, and is equipped with hotel arrangements for cooking by steam and coal. Two portable ovens supply home made bread and pies. A restaurant for women only, where the food is good and cheap and nicely served, wherever established, is sure to draw appreciative customers. 57,347 meals were served during 1894.

Library.—A free, lending library—could one be found for our working girls? Perceiving such a need twenty years ago was the first step towards accumulating that store of carefully selected volumes which has multiplied to its present count of four thousand. Any mother can safely let her daughter loose to browse at will among the books, magazines and periodicals of the W. C. A. library. This room opens directly into the vestibule and hall at the southeast corner of the building, covering a space of 32 feet 6 inches by 55 feet, with a gallery reached by stairs from the floor. The walls are adorned with portraits of men of letters. Fiction, biography, history, travel, poetry and miscellany, are all represented on the shelves. Art studies, neatly mounted on cards, are for loan.

Any self-supporting woman may become a member of the library by presenting responsible reference for her character. Her name and address are registered, and in the event of a library tea given by the committee, or the distribution of specially prepared leaflets, she receives her invitation or her gift. She may retain her book for two weeks; detention without renewal necessitates a fine of one cent per day. The present membership is 551.

The volumes are catalogued under the Dewey system. A reference library, for its size the most complete in the city, is for use in the

reading room annex, and is often consulted by students. Seventy-five magazines and periodicals are on file.

A paid librarian is in attendance from 12 to 9.45 P. M. every week day except Saturday, when the library closes at 5 o'clock.

Twelve years ago the Women's Christian Association, armed with book and pen, took up afresh the role of pioneer and placed education in the lap of our girls. At that time but one society had recognized the ambition of working women for self-improvement; the public night schools were for boys. Among the thousands of scholars who have entered the W. C. A. evening classes many were ignorant of the rudimentary elements of manual training or sewing, even to the use of a thimble or how to thread a needle; careful and individual teaching has been given these, with gratifying results. Bookkeepers, stenographers and typewriters have been fitted to enter mercantile houses at good salaries. Hundreds of women have been taught to do their own dressmaking, millinery, mending, darning, cooking, and enabled to establish themselves in their special trade as a means of support.

The teachers are carefully selected. After a few years' trial volunteers were excluded. No class is so large as to preclude individual attention on the part of the teacher with each scholar; when the limit of fifteen is reached, another class for another hour is formed. This does not apply when the instruction is given upon the blackboard. The friendly relation existing between committee, teachers and pupils, is fostered by a social evening at the invitation of the committee.

Classes are held on four evenings a week, from Tuesday to Friday. At 7.45 the pupils gather in assembly hall for brief opening exercises of scripture and prayer. Assembly hall is used for all public functions connected with Association work; class rooms open on three sides, with rolling wooden shutters to promote seclusion; the whole space covered is 57x60 feet.

At the close of the term, in May, an exhibition of work is given to all interested friends, with addresses by speakers invited for the occasion. Fifty-eight occupations were represented among the pupils of the past term. A few afternoon classes are formed at slightly advanced rates. The prospectus, 24 lessons, from October to May, is as follows:

| | |
|---|---|
| Reading, spelling, arithmetic (elementary), ..... | $2 00 |
| Grammar and composition, ..... | 2 00 |
| Dressmaking, ..... | 3 00 |
| Plain sewing and button holes, ..... | 2 00 |
| Millinery, ..... | 3 00 |
| Dress cutting by magic scale (including scale) ... | 3 50 |

| | |
|---|---|
| Bookkeeping, | $2 50 |
| Typewriting (12 lessons), | 1 50 |
| Stenography, | 3 00 |
| Writing, | 2 00 |
| Drawing, | 2 00 |
| French, | 2 50 |
| German (natural method), | 2 50 |
| Physical culture, | 2 00 |
| Home nursing and care of invalids, | 2 50 |

Employment Bureau.—To bring together employer and employed was another phase of work adopted because a bureau such as this did not exist. Unique in the fact that it places no restriction upon the occupations it will supply—with the one exception of domestic service, already fully provided for elsewhere. To this office are invited employers of women's labor in mercantile houses, institutions and private homes. Nurses, seamstresses, companions, dressmakers, matrons, housekeepers, copyists and women for all business branches, apply for positions. The office clerk, who is on duty from 9 to 4 o'clock daily, on Saturday till one, receives and registers every applicant. A member of the committee is present to listen to many a tale of woe, counsel those who need advice, or assist the woman who will do "anything," but who can do nothing well, to find her proper niche. She also obtains either by visit or by printed form the reference of every applicant for a position, using a like precaution as to the character of employers. No fees are charged; gratitude sometimes impels a donation to help support the work.

Entertainments.—After toil comes recreation. First class music, high-toned and popular literary amusement are appreciated, as the Association proves, for its free entertainments draw crowds of maidens and a sprinkling of their young men friends on the Monday evenings of six months in the year. Much of the talent provided has been freely bestowed, but the committee, who present as wide a variety in programme as possible, find more and more they must employ professionals.

Cards of admission presented to girls in shops and factories by the committee are sometimes used to serve as a personal invitation, and to advertise the entertainments among those for whom they were established. Some amusing experiences have arisen in the revulsion of feeling when the recipient of the card, who supposes a notice of prayer meeting is being foisted upon her, discovers, in reality, it is the form of relaxation after which her soul hankers.

The labor of preparing for the programme is divided among the members of the committee, who are responsible for certain evenings. Some of the managers are always present on Monday night.

Kensington Branch.—In 1891 the need in the Kensington district of Philadelphia for advantages such as our classes gave to self-supporting women, led the Association to rent a house in that part of the city in which to carry on such work. A caretaker occupies the house. On five evenings a week instruction is given by paid teachers in cutting and fitting garments, millinery, dressmaking, writing, home nursing; two terms of twelve lessons each, $1.00 a term for each study.

During eight months in the year a Sunday afternoon Bible class is held. A free lending library is for use of class members. The Y. W. C. A., Kensington Guild, which was formed by certain of the pupils, holds stated meetings for literary exercises, and for concerted action in mission work.

Sea Rest, Asbury Park, N. J.—Summer rest and its possibility for small wage earners was in thought twenty years ago when the seaside house at Asbury Park was opened. Sea Rest, corner of Heck street and First avenue, is for Protestant, wage earning women who cannot afford to pay much for a vacation trip. No doubt, its purpose is at times evaded, but on the whole, this house gathers year after year many who, but for it, could find no opportunity for change of air and scene. The first day in life spent out of the city and away from toil has dawned upon some of the Sea Rest boarders; and who can tell how many lives have been spared and strengthened, thanks to this rest by the sea!

From June 1 to August 31 a clerk employed for the purpose receives daily from 5.30 to 6.30, at Eighteenth and Arch, Philadelphia, the applications for board, made in person if possible. No applications are credited before this date. A paper is filled out giving name, address, denomination, employment, weekly income, name and address of employer, reference, and the date most convenient. On receipt of favorable reply to reference the name is entered for two chosen weeks; one dollar is paid by the applicant at time of entry, the receipt for which on reaching Sea Rest is handed the office clerk as an instalment on the board. Regulations are as follows:

"No boarder is admitted except by note from admission committee, Eighteenth and Arch streets, Philadelphia; this note mentions time of stay, which shall not exceed two weeks. As two persons are expected to occupy each room, it is suggested that friends or acquaintances should endeavor to visit Sea Rest at the same time.

Board invariably in advance, $3.25 per week or 75 cents per day. Extra charge for food not provided for the table.

No washing done for or by the boarders.

Occupants are expected to make their own beds and keep their rooms in good order. Scraps and waste material must not be thrown from the windows, but must be placed in boxes to be emptied by the chambermaid.

The house closes at ten o'clock, unless a special arrangement has been made with the matron.

Family worship will be conducted daily.

No boarder will be allowed to remain whose conduct is not satisfactory to the committee in charge of the house."

The use of bath house and bathing robes given at small charge.

Sea Rest opens between the first and fourth of July. Boarders are received in detachments,one day after another, so that the fortnightly changes shall not include the whole 106 at once. August, the holiday time for Philadelphia shop girls, is reserved for them. As school vacations begin early, teachers select the first weeks in July, by request. Housekeepers are admitted in September, when most of the wage-earners are back at work. Guests are gathered from many states. They represent numerous trades; the summer of 1894, 58 divided among 694 women. A beneficiary fund is used on certain occasions; this year eleven were made happy through its means. The reputation of Sea Rest has been summed up thus: "A Heaven on earth;" "A haven of peace and rest and recuperation after toil."

Previous to the opening of the regular season in July, managers and their friends of both sexes are permitted to spend there a sociable fortnight. The board of $6.00 or $7.00 a week accumulates a fund with which to start the summer. The family worship, which opens each day, is partaken in by all, led by a guest in the house. Through the summer friends from outside frequently conduct the service.

Whelen Memorial Home, Bristol, Pa.—Six summers ago Edward S. Whelen, Esq., presented the Association with its second holiday home. The requisites for admission and the regulations governing boarders are similar to those for Sea Rest, except there is no time limit. The house holds about fifty. The rooms vary in size and attractive location, therefore, board is either $3.00 or $3.50 per week. From Saturday afternoon to Monday morning $1.00 is the charge. Whelen Home opens the middle of June for three months. As a summer resort it is much appreciated, its shady lawn and spacious rooms tempting many a guest to prolong her stay. Managers of the Women's Christian Association were among the first to be admitted to hospitals and prisons as visitors doing a distinctively religious work.

Faith and Works, the monthly periodical published by the Association, keeps the public informed of the work of the W. C. A. and items of interest regarding kindred associations. Like the rest of the departments, it is conducted by a committee, sub-divided into editorial and business. Subscription price $1.00 a year.

The Women's Christian Association forms one of the representative bodies whose delegates comprise the Associated Committee of Women on Police Matrons.

While constant progress has been the manifest result issuing from the enterprise begun in faith and prayer a quarter of a century ago, the Women's Christian Association is assured the limit of its mission is not yet attained. One of its freshest hopes lies in embryo on the third floor of the present building where six rooms constitute the training school for domestics. A kitchen, dining room, parlor, class room, office and bed room, will furnish opportunity for instruction to a class of fifteen girls from sixteen to twenty years of age in each branch of domestic service; a course of three months' training will be required for graduating. The pupils will live in the building in charge of their own matron. One thousand dollars is required to equip and start the training school.

In the latter portion of the report will be found the remarks of women concerning their employment, etc. It must be remembered that most of the employes who responded to the inquiries are receiving low wages, and who naturally are not contented with their surroundings. What can be done in the way of improving their condition? The most obvious answer is to widen the sphere of employment. Something has been done in the way of invading the employments of men, yet if this is done, what will the men do for employment? Thus we are driven back to the old fact that has faced the world for generations, namely, that there are too many persons in the world for the work that is to be done. This is not so at all times and under all conditions, but it is true that there are periods, and which are increasing in number and duration, in which there is a surplus of labor, and when these exist doubtless wages will be low, and the terms of employment hard and unsatisfactory.

---

Saleswomen—Philadelphia.

Remarks by working women on their present condition and what will tend to improve it.

No. 4. If female employes could be steadily employed it would improve their condition materially. In answer to the questions "do you receive the same compensation as a man for the same class of work," I would answer that there are a great many things to be done in a store that a man could not do, such as making alterations to garments, etc.

---

No. 6. If a woman has been employed by this firm for one year she is allowed a vacation with full pay of one week. If for two years or more, two weeks with pay.

---

No. 8. The store where I am employed and which is one of the largest in Philadelphia is one of the best with regard to the manner in which they treat their employes. Everything that conduces to our comfort and convenience is done. There is a large and elegant dining room with tables, chairs and dishes and comfortable chairs

and lounges are provided. Tea, coffee, cream and sugar are furnished without cost, and there are three attendants in the dining room. Daily papers and all the magazines are also furnished, so that after lunch if there is any spare time we can improve ourselves by reading. I have been employed by the firm for a long time and have had four of my children employed at various times, and I have never had any of the hardships to endure that are complained of by the female employes of other firms in the same line of business.

---

No. 11. The store in which I am employed treat their female employes with the utmost consideration. They could not be kinder. We have a fine dining and sitting room with attendants. We have small tables with dishes, and tea, coffee and milk are provided free for our lunch.

---

No. 20. It seems to be a fact that there is a tendency amongst employers in stores to reduce the wages of female employes. The majority of saleswomen at the present are employed at salaries varying from $5.00 to $7.00 per week, and the indications point to a still further reduction from those meagre salaries. Now, a woman who has her board to pay, her clothes to provide and carfare to and from work to pay out of such wages can save absolutely nothing against sickness or other contingencies which may arise.

---

No. 26. I have nothing to complain of, as the firm with whom I am employed is the best in the business to work for.

---

No. 27. I must say that the house where I am employed is one of the best in Philadelphia. As everything is done for the comfort and convenience of the female help. There is a sick benefit, or relief association of the employes, with nearly 1,000 members, which pay to the members $5.00 in case of sickness and $100.00 in case of death. Employes are not obliged or compelled to join it. There is also a savings fund and the firm pays five per cent. interest to us on our savings.

---

No. 29. In the store in which I am employed we are allowed three-quarters of an hour for lunch. In my opinion, we should be allowed a full hour. I also think that during the warm weather we should have a half holiday on Saturdays. For several years past we have had a half holiday on Saturdays during July and August, but it would improve our condition if we could have it during all the warm weather.

---

No. 33. In my present situation I have nothing to complain of, but I have been employed in stores where the sanitary condition of the building was very bad and no attention whatever was paid to the comfort and convenience of the female help. It seems to me that it would pay any firm better to have a clean comfortable room for the girls to eat their lunch as they would feel refreshed after.

---

No. 35. The duties of a cloak and coat saleswoman are very arduous and I think she should have not less than fifteen dollars per week salary and a four weeks' vacation in summer.

No. 37. I am a foreigner, a German, and am well educated in my own language, but I find it difficult to get and keep a position as there are so many who were born in this country and who have only themselves to look after. If anything could be done by me to improve my condition I would be very glad.

---

No. 39. I am entirely satisfied with my condition and situation and am glad that I am in the employ of such a liberal firm.

---

No. 42. Working women should be obliged to work only eight hours per day with no reduction in wages.

---

No. 43. If more working women would maintain their dignity without being overbearing or disagreeable they would make themselves more respected and be more valuable to the their employers.

---

No. 44. In my opinion, shorter hours would improve our condition. If the stores would open at nine a. m., and close at five p. m. the female employes would get more rest and be more able to perform their work.

---

No. 48. I think that fewer hours and better pay would both improve our physical condition and give us a better chance for recreation.

---

No. 49. For every minute we are late in the store in which I am employed we are fined ten cents, and for fifteen minutes, twenty-five cents. But at holiday times we have only a half hour for lunch. It seems to be somewhat inconsistent.

---

No. 51. I think that every woman who is obliged to pay her board should receive at the least five dollars per week. And we should have a full hour for lunch at noon instead of from a half to three-quarters of an hour.

---

No. 53. I have always felt that where women fill positions and are fully as competent as men that a great injustice is done when they are not paid a like salary.

---

No. 65. I think we need shorter hours, better ventilated stores and better wages for working women. Fifty to seventy-five cents per day is a very small amount to live and help support a family upon. But I hope the future has something brighter in store for the working classes, both men and women.

---

No. 68. I am very well pleased with my condition and would wish that every other working woman was as well satisfied.

---

No. 76. If every firm was as considerate for the comfort of their employes as the firm with whom I am employed there would be very little to complain of.

---

No. 80. With the majority of firms if one is no longer needed she is

discharged without any notice, but if one wishes to leave, she is expected to give at least one week's notice. In my opinion, the same rule should apply in both cases.

---

No. 82. I am perfectly satisfied with my present position, and I never worked at any place that I liked so well. The place I had before was in a small store where I was obliged to work from 7.30 a. m. until 10 p. m. These hours were too long and will soon destroy a woman's health.

---

No. 83. As I have been only three months in the country I am not competent to express any opinion on the subject.

---

No. 84. I think that there should be equal pay for equal work for both sexes. The stores should be obliged by law to have proper sanitary appliances for their female help. Seats should be furnished to saleswomen which they could use when not busy without the fear of being discharged on some other pretext. A heavy fine should be imposed on storekeepers who keep their store doors open in cold weather freezing their miserably paid salesgirls as in done in several places on North Eighth street, Philadelphia.

---

No. 85. If female labor could be paid what it is worth it would be a cause for rejoicing amongst them and they would be encouraged to work, but to work hard for years and to receive such meagre pay, is very discouraging, as one has a poor chance to lay up anything for declining years or ill health.

---

No. 87. The firm with which I am employed is one of the best in the business in Philadelphia. They are very kind to the help. We have a sick relief fund, also a savings fund attached to the store, two things that every large store should have, and I am as happy and contented as many who have higher positions.

---

No. 88. I would be entirely satisfied if the hours of labor were shorter.

---

No. 91. I worked in one of the large stores for four years and received a two weeks' vacation every summer with pay, which I received in advance on going on my vacation, but I married and as my husband has been ill for a long time I am obliged to work again, but work is hard to get. There seems to be too many of us and the younger ones who are willing to work for small wages are pushing the older ones out, and all employers want cheap labor and we must submit.

---

No. 93. I can say for myself and for many other women who are employed in large dry goods stores that we are not properly or adequately paid. Imagine a woman existing (not living) on four dollars per week. There should be a law or rule to prevent a firm from discharging an employe without a notice of from one to two weeks.

---

No. 95. I have worked in all, since I first commenced, about six months, but I was paid such a small salary that I had nothing left after paying carfare and buying a cheap lunch.

No. 99. I am of the opinion that when a woman does a man's work she should have a man's pay. I do not think that some girls should have such long vacations in winter and others not any, all should be treated alike. Two weeks in summer is enough for any poor girl.

---

No. 104. When women combine the same as men do and insist upon a fair day's wages for a fair day's work their condition will be improved, otherwise it never will.

---

No. 105. To receive better pay will, in my opinion, make the greatest improvement in the condition of female workers.

---

No. 111. The salaries which are paid to women employed in dry goods houses should be seriously considered, especially when one is employed who has no one but herself to depend upon in case of an emergency. One of the largest firms in Philadelphia is about to take away a certain percentage on sales which they have hitherto paid, and when that is done the women affected will hardly have enough to live upon. If better wages were paid it seems to me that the employers would profit as well as the employed. Foreign immigration should likewise be dealt with by those in authority, which course would tend to uphold the dignity of American men and women.

---

No. 113. I think it would be an improvement to have a better and more comfortable room for the female employes as a resting and lunch room.

---

No. 113½. I will state that I am employed at a first class house, but just as soon as times become dull I am thrown out of employment, and as I am entirely dependent on my own earnings I deeply feel the loss of my work and wages, while some are kept who (some of them) only work for pin money. Herein is injustice shown by store keepers who should, in my opinion, inquire into women's circumstances when the force is to be reduced and retain those who are the most needy.

---

No. 118. I think that all business houses where females are employed should be compelled to supply stools or seats for them when not busy. I have no complaint to make of the firm with which I am employed as we are treated very fairly indeed, and I wish that all other stores were like it in that respect.

---

No. 119. It is my judgment that females doing the same kind of work as men should be paid as well.

---

No. 121½. I am perfectly satisfied with my condition and situation and I do not see how any employers could be better. The surroundings and comforts are all that could be desired.

---

No. 127. Better salaries would best improve the condition of female workers.

---

No. 128. I hardly know what remarks to make. When I first went

to the store where I am now employed six years ago I began on $5.00 per week salary. My present salary is $9.00 per week. We are allowed a certain percentage on some lines of goods which increases our wages one to two dollars per week. This firm is very good to its employes in other respects in providing a comfortable dining room with hot coffee and tea, gratis, and if a girl wishes to leave before the regular time she is given permission and there is no stoppage of pay in consequence. The firm also encourages the employes to save by having a savings fund which pays a liberal rate of interest.

---

No. 130. The firm with which I am employed give the greatest attention to the comfort and convenience of its employes. It really feels like home to see how cosily and comfortably everything is arranged. Too much of good cannot be said of them.

---

No. 131. The physical condition of women employed in stores would be greatly improved if they were permitted to rest occasionally when not busy. At two of the leading stores in this city where I was formerly employed we were compelled to stand all day and if we were detected even leaning against the counter we would be severely reprimanded by the manager or his assistant. I could give personal information regarding the treatment of female employes that would astonish those who are interested in the welfare of women.

---

No. 133. Some attention should be given to the ventilation of stores in which a great many people are employed.

---

No. 134. I have nothing to complain of and wish that every firm was as careful of its people as is the one with which I am employed.

---

No. 136. I think it is wrong for the proprietors of the large establishments to pay one saleswoman more than another who does exactly the same work.

---

No. 137. I think it is a cruel thing for employers of female labor to compel females to stand all day even when not busy under penalty of being discharged.

---

138. Cashier. I am strongly in favor of an eight hour working day. Ten hours is too long for a woman to be confined to a small office or sweat box, as many of them are. I think a month's vacation in summer with pay for a woman who has worked faithfully the whole year is none too much.

---

No. 147. Clerk. There are many stores where a large number of women are employed that have miserable toilet accommodations. The firm with whom I am employed have every accommodation for the health, comfort and convenience of the female employes. Excellent sanitary toilet rooms, dining room, a pleasant sitting room, furnished with couches, rocking chairs, books, newspapers, periodicals, writing materials, etc. We are also furnished tea, coffee, sugar and milk without charge and a steam table for heating onr lunch, with women to wait on us. I wish every firm was as considerate of their help.

No. 154. Bookkeeper. In answer to the question whether or not I receive the same compensation as a man, I would say that I formerly taught school and had a high grade certificate and had a great deal more experience in the work than a certain man who taught the school before, but because I was a woman I was obliged to take the school for ten dollars a month less salary.

---

No. 166. Milliner. In regard to vacations, I am a milliner and we have two seasons in the year, or eight months' work for which we do not get any pay nor do we expect any.

---

Noo. 174. Dressmakers. Dressmakers, employers, I mean, should not be permitted to keep their employes at night work unless they were provided with a good supper. There is too much night work in large establishments and it is very hard work for women, and that at this business there is a great deal of time lost between seasons.

---

No. 184. Copyist. Let women go into office work as men do, taking things as they find them and not asking any special consideration for themselves because they are women. Let them leave their home duties outside the office and give their attention to the duties for which they receive pay. When women make themselves worth as much as men, the day when they will receive the same pay will not be far distant.

---

No. 185. Typewriter. I find that a great deal of annoyance is caused to both male and female employes in large firms and business houses by chief clerks and heads of departments who, coming between the principals and employes, exact a great deal which would not be permitted if known; and often control wages unjustly as well. Many of these men in authority abuse it when the opportunity offers. They being governed by the desire of personal aggrandisement, and the desire to stand well with the employer are often harsh and arbitrary to the employes. The principal of course selects his managers for their business ability, but if he would occasionally investigate the course of these men it might have a very beneficial effect and conduce to the comfort of the employes.

---

No. 190. Stenographer. It would be of great advantage to wage earners if their employers would give them a reasonable length of notice if their services were no longer required, and also assign the reason for their dismissal. The latter would be of some use to them when applying for another situation.

---

No. 3*. I think if a woman respects herself and makes her employer's interest her own she will be treated accordingly.

---

No. 4*. If in the employ of this firm three months we receive sick benefits and all the employes are obliged to belong to the sick benefit society. The membership of this society is divided into three sections, or classes. The first section is composed of employes who receive $2.50 per week or less; the second section, of those who receive

a weekly salary of from $2.50 to $5.00; the third section of those whose salaries are in excess of $5.00 weekly. The monthly dues and assessments in case of a death are, for the first section, five cents; second, ten cents, and of the third section twenty-five cents. In case of death of a member of the first section his or her representative receives fifty dollars; second section, one hundred dollars; third section, two hundred dollars.

---

No. 8*. I think if we were paid weekly instead of semi-monthly and had an hour for the mid-day meal it would be better for us. The salaries that some of the girls get here are entirely insufficient to feed and clothe them properly. If I did not live with my mother my salary of $3.00 per week would be entirely insufficient.

---

No. 9*. I have no cause to complain of my own condition, but there are girls who work near me who do not receive sufficient compensation for the long hours of hard, steady, responsible work, which, if men performed, they would be much better paid. We should have a half holiday on Saturdays all the year.

---

No. 13*. It would be of great benefit to us if we had an hour to mid-day lunch instead of forty-five minutes.

---

No. 15*. If more attention were paid to the ventilation of stores it would be better for the health of saleswomen.

---

No. 19*. I have no fault to find as I am not altogether dependent upon my salary, if I were I would certainly be unable to support myself. I have no complaint to make of our hours, but in some stores where they are kept from 7 a. m. until perhaps 10 p. m. is too long entirely.

---

No. 20*. I must complain of a sick and death benefit society connected with the store where I am employed and to which all employes are compelled to belong. I think it an outrage to compel us to belong to this society against our inclinations, as the dues are quite an item to a woman whose salary is small.

---

No. 23*. It seems to me that a woman working for a large business house and driven half to death should be worth more than one dollar per day in wages. Furthermore, I think that 8.30 a. m. is early enough for a place of business to open, where the employes are obliged to stand all day.

---

No. 26*. I have been employed at one establishment for the last ten years, and my salary and condition as a working woman are entirely satisfactory.

---

No. 29*. I hardly know what to say. The store where I am employed is, I think, one of the best in Philadelphia. Of course, the rules are strict, but where there are so many employed discipline must be maintained.

---

No. 30*. I think that girls or women who hold positions of trust

and responsibility should be paid the same wages as men at the same work. The prevailing excuse is that men have families dependent upon them, so in a great many cases have women. I cast no reflections upon my employer as I am satisfied that he treats his female employes better than the average employer. From five to seven dollars per week is the salary of women who sell goods, while men are paid from ten to fifteen dollars for the same work.

---

No. 32*. I have been with my present employer for five years and in that time my wages have been increased from six, to twelve dollars per week. But there are some young women employed in the store who get such low wages that I wonder how they can live on them.

---

No. 36*. I was formerly a school teacher and my salary was equal to a man's in the same grade. The tendency in stores is to give men the best positions, even to selling goods exclusively for women.

---

No. 40*. It would help us greatly if we could have a half holiday on Saturday, all the year.

---

No. 45*. Girls who are in large stores have very little cause to complain in comparison with those in small ones. In the most of them, work is commenced at 8 a. m., one hour for lunch at noon, and a half hour for supper, and close at 9.30 p. m., and on Saturday nights at 11 p. m. There is where the drudgery is, and for that sort of work, women are paid from three to five dollars per week.

---

No. 50*. There is a large class of young women who are not absolutely compelled to earn their own living, who live with their parents and have no board to pay, and can have their wages for their own use, and in consequence can afford to work for low wages. This makes it difficult for a self-supporting woman to get employment.

---

No. 59*. An hour at noon should be allowed us but we get only forty-five minutes and during the holiday season only a half hour for lunch, when our working hours are from 8 a. m. until 10.30 p. m. for two weeks; but ten cents are deducted from our salary if we are one minute late in the morning. This is inconsistent.

---

No. 62*. In my opinion the condition of female wage earners is such that it will be a long time until it is improved. If women are competent to perform the same work as men they should have the same salaries. I believe in women's rights, and we ought to have them, and I hope to see an improvement in the near future.

---

No. 66*. I favor equal pay for equal work and if a saleswoman can do the same work as a man she should receive the same compensation.

---

No. 74*. I am certainly very glad to say or do anything that will improve the condition of women workers. In the store in which I am employed there is little to complain of, as the firm is as consider-

ate as I think it is possible for them to be, but in my opinion, eight hours per day is long enough for a woman to be kept in any store, by reason of the great strain on the nervous system. There is no restriction as to sitting when we are not busy, and a pleasant room is provided for us to eat and rest in, with lounges, where we can lie down for a few moments rest at noon. If we had an hour at noon it would be very beneficial.

---

No. 75*. If we could have better compensation it would improve our condition greatly. I have sold eighty dollars worth of goods in a day and got one dollar pay for it. Think of it!

---

No. 87*. If we could have a whole hour at noon it would help us greatly, and if the store would close on Saturday nights at 6 instead of 6.30 it would also improve things. Then, if we were paid weekly we could manage better than with semi-monthly pay.

---

No. 100*. I wish you could induce the firm to allow us an hour for dinner and to close the store at 6 p. m. on Saturdays.

---

No. 101*. In the store in which I am employed we are not paid if we are sick for a day or two. If sick for a prolonged period we are paid $2.50 for the first week and $5.00 for the time after the first week from a beneficial society to which all employes must belong and pay dues every month while employed. But if we are discharged or leave, even if we have never received any benefits, we sever our connection with the society, and forfeit all we have paid in.

---

No. 103*. I have been in my present position three years and have never had any increase of salary. Up to the first of the present year we received a small percentage on our sales, but that has been cut off, which reduces my pay quite a little. The proprietor of the store is a very kind and considerate man, but some of the underlings are not so thoughtful for our comfort, or things would be a great deal easier for us.

---

No. 110*. Female employes in this store who have worked or been employed for one year get one week holiday with pay in summer; if employed for eighteen months, ten days; if for two years, two weeks. This is supposed to be compensated for by working two weeks at night during the Christmas holidays.

---

No. 120*. I have not much fault to find only about the long hours on Saturday, which leave us little time to prepare for Sunday.

---

No. 124*. In justice to us we should have an hour at noon, and the store should be closed at 6 p. m. on Saturdays.

---

No. 126*. I think shorter hours for the whole year, and a half holiday every Saturday from June 1st to September 30th would help us.

---

No. 137*. Females do not get sufficient pay for their labor. They should get equal pay with men when they perform the same work and observe the same hours.

No. 138*. I know of departments in the store in which I am employed where men and women sell the same goods, besides doing the same amount of work in taking care of stock, etc., and in many cases the woman, in at least four days of the week, has the largest amount of sales on her book at closing time, but the man receives from four to eight dollars a week more salary than the women. I cannot see any justice in this.

---

No. 143*. The beneficial society connected with the store where I am employed costs us from thirty to sixty cents per month each. As a rule saleswomen are better treated by large firms and in large stores than in small ones.

---

No. 144*. I do not think it is right for an employer to compel employes to join a beneficial society connected with the store. A society is all right, but we should be permitted to do as we like about joining it unless the membership would continue after we had left the firm's employ. A person might have been paying dues into this association for ten years and have never drawn any sick benefits, but if the firm has no need for us longer, or we leave on our own account, what money we have paid in is lost as our connection with the society ceases. The hours of work in stores should be from 8 a. m. until 6 p. m.

---

No. 157*. Where I am employed my position compels me to stand at all times which is very injurious to a woman. I think all women should be permitted to sit when business is not pressing, if even for a few minutes. We should be allowed a full hour for lunch at noon and eight hours a day is long enough for a day's work, as it is very tiring and confining.

---

No. 160. I would respectfully suggest that we be allowed an hour for dinner. And if some one should impress upon customers the advisibility of doing their shopping earlier in the day, it would be heavenly. The rush comes from 4.30 until 6 p. m., when the girls are tired out.

---

No. 184*. I am sure it would benefit us greatly if the Saturday half holiday that is given to us during the months of July and August was continued all the year, as it would be a great source of rest and recreation for us. We hope that in the near future there will be a Saturday half holiday for all working people in the country.

---

No. 186*. Iwould respectfully suggest that from 8 a. m. to 5 p. m. would be long enough for women to work; and we should have a full hour to dinner, instead of forty-five minutes, as now.

---

No. 190*. If you could be instrumental in inducing our employer to close the store at 6 o'clock every evening and at noon on Saturdays we would be doubly grateful. Also, to give us an hour for lunch at noon. It would be such a godsend to abolish the long hours during the Christmas holidays; we would not come to the store in the mornings feeling about as tired as when we left it the night before.

No. 202*. There is very little consideration displayed for female employes in the department of the store in which I am employed. We are compelled to stand all day, as no seats are provided for us according to law.

---

No. 207*. I must state that the majority of females who are employed in stores are not paid salaries sufficient for them to live upon. In some cases about enough is given them to pay their board. Then they are expected to present a respectable appearance; if they do not, they are not given employment, and in many cases a respectable, able and willing worker is turned away on that account. If better salaries were paid to working girls, fewer of them would have to resort to immorality to eke out a livelihood, and perhaps support an old father and mother as well.

---

No. 217*. In answer to your invitation to make any remarks which will improve the condition of female workers, I beg leave to say that if stores would be closed at 1 p. m. on Saturdays all the year it would improve our condition wonderfully.

---

No. 219*. It would benefit us greatly if we could be paid weekly as we were formerly in this store. It would benefit us greatly as well, if we could have a full hour at noon instead of forty-five minutes as at present, as the extra quarter of an hour would be a great relief to us as a resting time.

---

No. 230*. The beneficial association to which all girls in this store are obliged to belong pays $2.50 the first week a member is ill, and $5.00 per week for the thirteen weeks following. If we are absent through sickness for two or three days, we do not receive pay for the time so lost.

---

No. 243*. I think it would benefit us greatly if we could be paid at the end of each week.

---

No. 251*. If we could have higher salaries it would, of course, improve our condition. Selling goods is a very trying occupation for females and some women are sensitive, and a pleasant word now and then from those in authority over us would be more encouraging and be a greater incentive to girls than the cross ones they get now.

---

No. 269*. The sick and death benefit society attached to the store where I am employed is a good thing, as by paying a small sum for dues each month the members are paid sick benefits for thirteen weeks each year. I think it is a grand society which has been instrumental in doing a great deal of good, and it has been of great help to many in time of sickness. I think such an organization should be established in all large stores and manufacturing establishments.

---

No. 274*. I am employed in the millinery department of the store in which I am employed. There are about thirty ladies employed in that department, and no seats are provided for them to sit when not busy. They are obliged to either stand or walk all day, and week after week. There is one chair, which is usually occupied by a customer.

No. 275*. I am of the opinion that the success or non-success of women in stores depends greatly upon themselves. If the majority of young women in stores would realize fully that the entire working day agreed upon when they accepted the employment, belongs to their employer and should be devoted to his interests, I am convinced from my own experience that their services would be recognized and substantially appreciated.

---

No. 281*. I think the hours demanded of salespeople are entirely too long. Standing continuously nine hours each day, after having walked to work for lack of money to pay my fare by reason of insufficient wages, is very trying.

---

No. 289*. If the hours of work could be lessened it would be a great benefit to us. Eight hours is long enough to be obliged to stand and breathe the vitiating air, as it is very exhausting to the nervous system.

---

No. 292*. I wish we could have an hour for dinner instead of forty-five minutes, and the store would close on Saturdays at 6 p. m.

---

No. 493*. For two weeks before Christmas our hours of labor are from 8 a. m. to 10.30 p. m., with an interval of a half hour for lunch and forty-five minutes for supper, which we have to purchase at our own expense.

---

No. 507*. We have a nice room for a sitting room where we eat our lunch and everything is comfortable. If they would only be a little more lenient with us during the winter months in regard to the hour of commencing in the morning, it would be beneficial, as women who live a long way from the store are frequently detained by street cars being blocked.

---

No. 520*. Our hours of work should be nine a day, with an allowance of an hour for dinner; we get forty-five minutes now. There is a beneficial society attached to the store which we are obliged to join, and the dues are taken out of our salaries. Now, I do not think this should be done, but whether a woman should join this society or not should be optional with herself. If we work a half hour overtime, we get nothing for it, but if we are an hour late in the morning we are fined forty-cents, and if one minute late we forfeit ten cents.

---

*Inspectors, Philadelphia.

No. 303*. The inspectors in this store are obliged to report for work at 8 p. m. sharp, and if one minute late are fined ten cents. The saleswomen are allowed fifteen minutes grace and are not marked late until after 8.15 a. m.

---

No. 305*. It would be a great benefit to us during the summer months especially, if the store could be closed at 5 p. m. during the

*Inspectors in large dry goods and other stores in Philadelphia are girls who inspect the goods which are sold, and wrap them to be sent to customers.

week, and at 1 p. m. on Saturdays. If this were done from, say, June until October, it would afford a little more time for rest and recreation for those who cannot afford a vacation.

---

No. 309*. I think we should have shorter hours and a half holiday every Saturday, which we get now only during July and August. We have a beneficial society connected with the store to which we are compelled to belong, and sixty cents per month is taken from our pay. So I do not call this being paid when we are sick, for we are only being paid our own money back again.

---

No. 313*. I do the same work as a man for much less wages. I think eight hours per day is long enough to work.

---

No. 318*. The inspectors work from 8 a. m. until 6 p. m., but very frequently when we have been busy all day and when closing time comes, if the goods are not all wrapped up we are kept from fifteen to thirty minutes later to help clear up the counter. And yet if we are a few minutes late in the morning, ten cents is taken from our pay.

---

No. 322*. I do not see why distinctions should be made between one class of employes and another. The saleswomen in the store are permitted to come in as late as 8.15 in the morning and leave at 5.45 every other evening. Whereas, the other female employes are compelled to be on duty from 8 a. m., sharp, until 6 p. m. every day. I do not think it is right to compel us to join the beneficial society connected with the store. I would like to have shorter hours on Saturdays, and all female employes to be on equal footing as to hours of work.

---

No. 326*. This store closes at 1 p. m. on Saturdays during July and August. I think it would be an excellent idea to close at 5 p. m. on other days during the hot months, as we are compelled to stand during the greater part of the day.

---

No. 330*. I think every person who works, male or female, should have an hour at noon for lunch, for any less time causes us to be in a flurry to get back in time, and, if not back in time there is a fine of ten cents imposed, which is more than many of us get in an hour. We get forty-five minutes now, but the other fifteen minutes, while not much in the eyes of people of leisure, would be a great blessing to the working girl in enabling her to get a breath of fresh air or a rest, as she might desire.

---

No. 334*. The hours of labor should be reduced, and there should be at least an hour for lunch. Night work should be done away with entirely during the holiday season, for during that time the pressure during the day is enough. A girl, after the busy season, is a wreck and is only fit to go to bed for a week or more.

---

No. 345*. I think that women who do the same work as men should receive the same compensation. Eight hours should be a day's work and one hour for dinner. Those of us who are required to wear a uniform should be paid extra. We are obliged to wear black dresses.

No. 350*. Girls who work for four dollars per week and pay three of that for board and pay extra for washing, have a hard time and very little money to dress themselves properly. There are plenty of them in this store who are only paid the above salary.

Miscellaneous Female Employes, Philadelphia.

No. 361*. Stenographer.—In answer to your invitation to make any remarks that will, in my judgment, improve the condition of female workers, there is much that might be said on this subject. First. Why are factories and similar places so carefully inspected and the offices in large mercantile establishments left unnoticed? Their sanitary condition should be looked after, as myself and many others suffer intensely from being so many hours in such unhygenic surroundings. No woman should ever be a clerk unless she is forced to the unnatural servitude.

---

No. 367*. Bookkeeper.—I cannot understand why females should receive less remuneration than men for the same kind of work, as in many instances they have more patience and do better work, being more particular than the opposite sex, and for every reason they should not receive less.

---

No. 376*. Bookkeeper.—I think when we work overtime, as we are constantly doing, we should be paid extra for it. Working at night, as we are compelled to do, we are compelled to give up any thought of pleasure or recreation, as we do not feel like dressing and going out after such long hours of constant and exhausting work.

---

No. 377. Bookkeeper.—Judging from my own feelings, females, particularly those who do clerical work, should have to work only eight hours per day, and have a half holiday every Saturday, or at least from 3 p. m. on that day.

---

No. 378*. Bookkeeper.—I think the firm with which I am employed pay as fair salaries to women as the majority of others in the same business, but they are not equal to the men's. I know in our office the men get more salary for a poorer quality of work than women do.

---

No. 379*. Accountant.—There should be some law or rule forbidding any employer from compelling a female to be worked more than a given number of hours per day or per week. I have known women in an office to be obliged to work until 8 or 9 p. m. daily for a long time in finding a monthly ledger balance, which they had not time to look for during the day and attend to their regular daily work. This should not be.

---

No. 382*. Bookkeeper.—It seems to me that of late years women are becoming bread-winners in the same measure as men, and as such when they do the same work as a man, they should receive the same compensation. Still, I presume, there is much to be said on both sides of the subject making it difficult to form an opinion.

No. 392*. Bookkeeper.—My impression is that in large stores male help, at least at clerical work, is being gradually done away with and cheaper female help substituted. Fewer hours of work would greatly benefit us.

No. 398*. Bookkeeper.—In the store where I am employed we seem to get rather the worst of it, that is, the female clerical force. During the Christmas holidays we are kept until 10 p. m., and we are frequently kept at night when the ledgers are not in balance.

---

No. 399*. Bookkeeper.—I think we should receive one hour at noon for lunch and all saleswomen should be permitted to sit when not busy. It is sad to see a young rosy-cheeked girl come in to one of the large stores to work, and then to see her in a few months a pale-cheeked, careworn, haggard, broken down girl. I think that women, when they do the same work as men, should receive the same pay. Now, in my own case, I know I do as much as a man, and think I have as many brains and take as much care. It is urged as an excuse that a man has a family to care for. That, to my mind, is no excuse whatever, as a woman may have a widowed mother, as in many cases, she may be a widow herself and have children to support. But, in any case, if she does as much work as a man and does it as well she should get the same pay.

---

No. 400*. Accountant.—We are allowed only forty-five minutes for lunch when we should have a full hour. I, with a number of the other accountants, have worked from the middle of December for several weeks at night until 9 o'clock with no extra pay except thirty-five cents for supper, but if we come a minute late in the morning we are fined ten cents. There is no consistency about this.

---

No. 401*. Bookkeeper.—When the ledgers are out of balance we are obliged to stay at night until we get them balanced. Quite a number have worked at night for two or three months until 9 p. m. with no extra pay except a cheap supper is provided for them.

---

No. 405*. Bookkeeper.—In my opinion a woman doing the same work as a man should receive the same compensation. The reason given why they are not is that a man has a family to support. In many instances this is not the case, as he has only himself to look out for, being a single man. I have my mother to support and I think I can say without egotism that I do my work as conscientiously and precisely as a man could. Why, then, should I have such a small salary in comparison?

---

No. 408*. Bookkeeper.—Better pay and shorter hours, and men's pay for men's work would improve our condition.

---

No. 415*. Clerk.—Shorter hours, better pay and more consideration from those placed in authority over us would greatly improve our condition. Seven dollars a week is a small compensation for working from 8 a. m. until 6 p. m. (often it is 6.15 to 6.30). The most rigid punctuality is exacted and if we are not on duty promtly at 8, if only one minute late, ten cents is taken from our pay, and when the long-looked for two weeks roll around, one is surprised to find

how these unavoidable mishaps count up. The beneficial society is another—what shall I call it—necessary evil. There is no choice for us, we must join it. I have not had full salary at any pay in four months, and in six years have not received a penny from the society. If the three first mentioned conditions were remedied, a great deal of happiness would ensue.

---

Saleswomen, Allegheny County.

No. 197. I think our hours of work are too long. From 8 a. m. to 5 p. m., Saturdays included, would be long enough to keep stores open. Seats should be provided for us when not busy, as it would be a great relief for us to rest even for five minutes at a time.

---

No. 198. If we had seats back of the counters so that we might rest occasionally, it would improve our condition immensely, and if the stores in Pittsburgh would close on Saturdays at the same time as other days it would also help us greatly, as, when we work until 10 o'clock on Saturday night, we do not feel like doing anything but resting on Sunday.

---

No. 221. Having been a working woman for a number of years, I feel competent to determine what would better our condition greatly. First, our working hours are too long. From 8 a.m. until 5 p.m. would be long enough through the week and until about 6 p. m. on Saturdays. Then we should be provided with seats behind the counters, to be used when not busy. Anyone not accustomed to it cannot realize how much a rest of from five to ten minutes in an hour helps a woman.

---

No. 224. All stores should be closed earlier on Saturday nights and seats should be provided for us and we should be allowed to use them without being scowled at by the manager or proprietor, as they are inclined to do if we are seen sitting for a few minutes after standing perhaps for six or seven hours. And if some of the female customers, who call themselves ladies, would be a little more considerate of the feelings of saleswomen, and not treat them as if they were mere machines, it would add to their happiness.

---

No. 227. If the stores could be closed on Saturday nights it would be conducive to our health to say the least. In the name of common humanity I earnestly protest against the manner in which the little cash girls are treated in some of the large stores in Pittsburgh. They are made to do the work of porters in pushing heavily loaded trucks about the store and are compelled to go sometimes twenty times in a day up and down from four to six flights of stairs and frequently carry heavy packages up and down them, as they are not permitted to ride in the elevator. This sort of work is simply sending them to premature graves.

---

No. 229. I think that proprietors of stores should be compelled to comply with the law obliging them to provide seats for female employes. The stores should also close on Saturday nights. Think of

a woman being obliged to stand from 7.45 a. m., until 10 p. m.! I have frequently seen girls faint and have to be taken to their homes from sheer fatigue. I do not understand why a woman should not receive as much pay as a man for the same kind of work. It is no excuse for proprietors of stores to say that men have to support families; so also do a great many of the women.

---

No. 231. Cannot a law be passed compelling stores to close on Saturdays at 6 o'clock p. m., the same as on other days, as it would be a great improvement to our condition.

---

No. 233. All stores should close at 6 p. m. every day. Some keep open until 10 p. m. every day, which is a long time for women to be obliged to stand.

---

No. 235. I think nine hours a day would be long enough for stores to keep open. In this store we work ten hours, and thirteen on Saturdays. These blanks were only given out to those girls in the store who receive the best pay. There are plenty of girls here whose pay is so small that the proprietors were ashamed to give them blanks to fill out. It is a wonder how they pay board and clothe themselves on the miserable wages they get. Instead of being paid for vacations, we are compelled to take them, whether we wish to or not, when business is dull.

---

No. 239. It would be a decided improvement to the condition of female workers if stores would be closed at 6 p. m. on Saturday evenings. Fourteen hours a day is too long for females to be compelled to stand.

---

No. 248. Saturday night work should be done away with and all stores closed at 6 p. m., so that the salespeople could have Saturday night to rest that they might be in a condition to attend church on Sundays. Stools, also, should be provided for saleswomen and they should be permitted to use them. Then there should be some sort of decent place provided for us to eat our lunch, and hot tea and coffee provided, as they are in the large stores in Philadelphia.

---

No. 249. In the store where I am employed the lunch room is in the basement, where there are no windows at all and consequently no ventilation. It is a miserable place in which to eat. Then there should be seats which we should be permitted to use when not engaged with customers. The hours on Saturdays are too long. Something should be done to remedy the above evils.

---

No. 250. I think Saturday night work should be done away with. From 8 a. m. to 6 p. m. all the year would be long enough. Stools should be furnished for us to use at leisure times. Also, a decent lunch room should be provided and facilities to make or heat tea or coffee, as cold lunch is not very strengthening.

---

No. 258. Our hours are too long. From 8 a. m. to 5 p. m., Saturday and every other day would be long enough to work, and we should

be provided with stools, under the law of March 22d, 1887, and not be discharged for using them when not busy.

---

No. 293. It is a shame to ask a woman to work such long hours for such small pay, and then to be required to stand all day is too much. There should not be any night work on Saturdays, but stores should close at 5 p. m. the whole year.

---

No. 295. The Saturday nights work always seems like the proverbial "last straw." We are not allowed stools or seats, and for a woman to stand from 8 a. m. until 10 p. m. is a long, weary day, without a chance to sit even a few minutes. One is too tired on Sundays to rise and go to church. I could say more did I think it would do us any good.

---

No. 296. The proprietors of this store are very nice in comparison with others in the same business, but there is great room for improvement. Shorter hours and stools behind the counter would help us vastly. It would be a still greater improvement if we were to be paid something when sick. But this is too much to ask.

---

No. 298. I would like to see stools behind the counters and shorter hours on Saturdays. We are kept until 10 p. m. on that day, and it is midnight before some of us get home, so that it is almost impossible for us to get up in time for church on Sunday morning, and store girls need church as badly as anyone except, perhaps, their employers.

---

No. 306. It would be very beneficial to saleswomen and other female employes in stores and, I do not think any loss to their employers, if all stores were not kept open more than eight hours per day. Also that clerks should be allowed to sit at intervals when not busy.

---

No. 315. I think that in winter, especially, 8 a. m. would be time enough to open stores, as sometimes it is hardly clear daylight at that hour. And above everything women should be permitted to sit when not engaged with customers. The proprietors of some of the stores claim that we are permitted to sit, but if we were seen sitting we would be likely to be told to go home and sit, or something to that effect. If such men had good horse sense they would know enough to let us rest occasionally, as we would feel better and more like working, and it would be to their advantage.

---

No. 321. To illustrate the inconsistencies of some employers in Pittsburgh, girls are fined ten cents if they report later than 7.35 a. m., but are allowed only thirty minutes for lunch.

---

No. 331. In this store if we are five minutes late we are fined ten cents, but we receive no extra pay when we work overtime, as I think we should.

---

No. 339. I would respectfully ask the privilege for store girls of being allowed to sit when not busy. It is very injurious to a woman to be obliged to stand from 7.30 a. m. until 6 p. m.

No. 361. I think 8 a. m. would be early enough to open stores, especially in winter. Selling goods would not be so tiresome to women if they were permitted to sit when not busy. Nine hours is a long time for a woman to remain on her feet.

---

No. 376. The hardest trial the saleswomen are obliged to undergo is that they are not permitted to sit down when not busy.

---

No. 379. If we had working hours from 8 a. m. until 5 p. m. and were paid for a two weeks' vacation in summer it would be only doing us justice.

---

No. 380. It certainly would be a great improvement to our condition if stores were closed on Saturadys at 6 p. m. at the latest.

---

No. 389. It would better our condition greatly if stores should be closed at 6 p. m. every day, especially in the summer.

---

No. 392. If stores would close on Saturday evenings at 6 instead of 10 p. m., it would improve our condition. Also, separate toilet rooms should be provided for the employes from those used by customers.

---

No. 397. I think that if stores would close on Saturdays at the same time as through the week it would benefit us greatly, and we would be better prepared for the duties of the Sabbath. I trust that the day will soon come when our request will be heeded.

---

No. 398. We think that seats should be provided by employers so that when not busy we might sit. All places of business should close not later than 6 p. m. every evening. The salaries of men and women should be more on an equality when the work is similar.

---

No. 412. If girls who have homes and parents who are able to support them and they are not compelled to work would not take positions, then employers would be obliged to pay living wages, which they do not do now.

---

No. 407. What would improve our condition would be, first, eight hours a day are all that should be required of saleswomen; second, in the store where I am employed we have a miserable basement for a lunch room; it has not a window in it and everyone knows that fresh air is essential to good health and spirits; third, every woman should be permitted to sit in her leisure moments, which we are not allowed.

---

No. 411. I am greatly in favor of shorter hours on Saturdays. The majority of Saturday night customers are composed of those who could shop by daylight if they would, and stools or seats should be provided which should be for the use of the female employes when not busy, and those for whom they are provided should be permitted to use them and not be obliged to jump if one of the firm should come along as they do now.

No. 426. Our hours are too long by about one hour per day. I think the Christian people of Pittsburgh should set their faces against the Saturday night work. All working girls are worn out, body and soul, by the end of the week, and then to have to stand four long hours on Saturdays after six o'clock simply unfits a girl for the duties of the Sabbath.

---

No. 433. It would greatly improve our condition if stores should be opened at 8 a. m. and close at 6 p. m. all the year, and it would add to our comfort if seats were provided and we were permitted to use them.

---

No. 435. I think we should be paid for vacations, as, when those who can afford to take a vacation are away, those who cannot afford it are obliged to do the work of those who are away enjoying themselves.

---

No. 438. I think it would improve our condition if our salaries were increased. In very few cases is a woman paid as much as a man for the same class of work, and I see no good reason why she should not be.

---

No. 449. I would be only too willing to work from 7.45 a. m. until 6 p. m. if we could have the same hours on Saturdays.

---

No. 450. I think it would be an excellent thing if the stores would close at 6 p. m. on Saturdays, especially during the hot summer months.

---

No. 455. While I have no complaint to make of the treatment received by me from the firm with which I am employed, I think that women who work faithfully in stores during the year should have at least one week's vacation with pay, and also if we are absent, sick, for a day or so.

---

No. 459. This store is kept open on Saturdays until 10 p. m. I think it would improve the condition of working women, at least of those who work in this store, if it could be closed at 6 p. m. on that day.

---

No. 460. While the proprietors of this store are very good people, there is room for improvement in the matter of shortening our hours of labor. By closing at 6 p. m. every day and furnishing stools for our use behind the counters when we are not busy, our condition would be improved immensely.

---

No. 471. It would improve our condition if women employed on each floor of large establishments had dressing rooms on the same floor. It is very tiresome to be obliged to walk up seven flights of stairs to get our wraps, after having been on our feet all day.

---

No. 472. There should be stools provided for saleswomen which they could use when not busy; also, we should be permitted to use fans in hot weather, and above all things else, we should be provided

with a proper and clean room in which to eat our lunch, which should be well lighted and ventilated.

---

No. 474. My opinion is that saleswomen should be paid for lost time occasioned by sickness, and also be allowed a vacation in summer with pay. This would be a fair compensation for the extra work we do at holiday seasons.

---

No. 488. We should have stools provided for us to sit while we are not busy, as it is a long time for a woman to stand from 7.45 a. m. until 6 p. m. We should also have a clean and well ventilated place in which to eat our lunch, also facilities for making or heating tea and coffee.

---

No. 495. In answer to the request to make any remarks or changes that will tend to improve our condition I would say that shorter hours of labor, permission to sit when not absolutely employed and a decent place above ground to eat our lunch in. These would improve our condition vastly.

---

No. 501. I think the store should close at 6 p. m. on Saturdays, the same as on other days. There also should be some improvement made in the toilet accommodations for saleswomen.

---

No. 502. I hope the time will soon come when better wages will be paid for working women and their hours of labor shortened. I, for one, find great hardship in keeping myself on the small pay I receive. I wish you success in your efforts to better our condition.

---

No. 506. There is one very important matter which would improve our condition greatly, and that is some rule or law by which the stores could be closed on Saturday nights. I am sure that our employers are just as anxious for it as we are, but all should agree to close.

---

No. 522. It is very hard for women to be obliged to stand all day and on Saturdays until 10 p. m. A woman who lives a long distance from her place of employment does not get to bed on Saturdays before midnight, and then she is completely exhausted.

---

No. 535. I think we should have a half holiday on Saturdays all the year. This would give us a much needed rest and also give us time to prepare for the duties of the Sabbath and also would be an inducement to us to increase our efforts for our employer's interests.

---

No. 536. If we were allowed seats behind the counters and were not afraid to use them when not actually busy with customers, the health of many of us would be greatly improved.

---

No. 588. Stenographer.—I think board and room rent are too high in this city. In order to obtain board in a respectable and desirable locality the rates asked are entirely out of proportion to the average

woman's salary. Since women are paid less than men for their labor, why should they be obliged to pay more for their subsistence?

---

No. 559. Dressmaker.—I have nothing to complain of except that I would be thankful if all stores would close at 6 p. m. every day, including Saturdays.

Saleswomen, Lackawanna County.

No. 6. In the majority of stores in Scranton there is some man or boy to do the heavy lifting, but I have to do all the lifting and reaching for myself. This sort of work is too hard for a woman.

---

No. 15. I think female workers should be paid more salary when they do the same work as men. Their carfare is as much as a man's and also nearly as much for board.

---

No. 19. I think that females who perform the same class of labor as men should receive as much pay.

---

No. 21. Our condition would be very much improved if the stores could be closed on Saturday nights at 6 o'clock. If it is necessary to keep open one night in the week it might be changed to Monday night, for that would be after our Sunday rest.

---

No. 22. If females were permitted to have chairs or stools when not busy it would be a great benefit to their health. Secondly, the stores are not properly heated, which is also a detriment to the health of female employes.

---

No. 28. I would complain of the injustice of imposing a fine of a penny a minute for the time we report late. We are compelled, in the busy season, to work after hours and never receive one cent for it, but the fines go on just the same.

---

No. 41. Shorter hours, especially on Saturdays, and better wages would improve our condition. I wonder how employers expect a woman to board and maintain herself on a salary of $2.50 per week—my wages.

---

No. 43. If we were paid better wages it would improve our condition greatly. I exist on $3.00 per week.

---

No. 47. Men who have charge of departments in this store receive salaries of from twelve to fifteen dollars per week. Where women are in charge they receive about half as much.

---

No. 58. I think in stores where the female employes are compelled to take two or three weeks' vacation they should be paid at least for one week or ten days of the time. In some stores they are so paid.

---

No. 73. I wonder that our employers do not see and recognize the impossibility of any woman supporting herself on a salary of $2.50

per week. This is my salary. We should have chairs or stools behind the counter and have liberty to use them in our moments of leisure.

---

No. 80. Shorter hours on Saturdays and better wages would, in my judgment, improve our condition.

---

No. 91. I am of the opinion that females who work in shops and stores are confined too much and need more fresh air, and, I was about to say, exercise, but when we are obliged to stand nine hours per day we have enough exercise of that sort. I think a Saturday half holiday would be highly beneficial to our health. A woman who has stood on her feet on Saturday from 8 a. m. until 9.30 p. m. or later, and then been obliged perhaps to walk one or two miles to her home, is very prone to remain in bed on Sunday morning instead of attending church. Therefore, I say, give us the Saturday half holiday, and we will be improved not only physically but morally as well.

---

No. 98. I think we should be paid for the time we are obliged to lose by a summer vacation.

---

No. 102. In my opinion our hours are too long, especially in the summer season. If we could have the Saturday half holiday it would afford fresh air and rest for a great many poor working girls who cannot afford to take an extended vacation.

---

Cigar Manufactory, Lackawanna County.

No. 125. Tobacca Stripper.—We are frequently compelled to take orders on the local stores as part of our wages, which we consider a hardship, as we are charged high prices for what we purchase in them. We dare not complain though, for, if we did, our services would no longer be required.

---

No. 135. Cigarmaker.—Girls are obliged to serve an apprenticeship of three years at cigarmaking, when they can learn it in one month.

---

Female Knitting Mill Employes, Lackawanna County.

No. 153. If we were allowed an hour for dinner it would be a great help.

---

No. 165. Looper.—In behalf of female workers I suggest that nine hours would be long enough for a day's work, and we should have a whole hour for dinner. Also, that we should have weekly or at least semi-monthly pay.

---

No. 184. Inspector.—We should be paid at furthest every two weeks. I am very much opposed to our miserable wages.

No. 187. Underwear making.—I think we should be paid equally with men for the same work. We should also be paid every two weeks, and get at least two weeks' vacation in summer, with pay.

---

No. 191. I would very much approve of the eight hour system for women who are obliged to work for a living. I also favor a Saturday half holiday and better pay for women. I have to pay my entire wages for my board. We should be paid semi-monthly.

---

No. 195. I would like better wages and to be paid weekly or at furthest semi-monthly.

---

No. 208. As we are invited to make such remarks as will improve our condition, I think if we were paid semi-monthly it would improve it, and higher wages would still further improve it.

---

No. 211. I think shorter hours of labor, semi-monthly pay, and a half holiday would greatly improve our condition, and a short vacation in summer would add to our happiness.

---

No. 212. Women should have more pay. It is a terrible thing for a woman not to get enough wages to pay her board, and I do not get that much.

---

No. 214. I think eight hours a day long enough for any woman to work. And we should have our pay, such as it is, semi-monthly.

---

No. 264. I think that we should have shorter hours on Saturdays at least. And all employers should furnish us ice water in summer.

---

No. 264. We would be greatly benefited were we to be paid every two weeks instead of working almost two months before we get paid for one month. I think we should be paid at least two-thirds as much as men for the same work. And eight hours should be a day's work for all women in mills or factories.

---

Female Button Factory Employes, Lackawanna County.

No. 669. I think it would be a great improvement if the proprietors would pay some attention to the foremen and prohibit them from using such profane language to the girls.

---

Miscellaneous Female Employes, Lackawanna County.

No. 639. Waitress.—My hours are from 10 a. m. until 9 p. m., nine in winter and eleven in summer, and I work every third Sunday and I am not allowed any time at noon.

---

Silk Mill Employes, Lackawanna County.

No. 302. Less work and more pay would be for our benefit.

No. 304. I think eight hours a day would be long enough for us to work for the miserable pay we get.

---

No. 306. I think that there should be shorter hours for girls working in factories. It is hard to work from 7 in the morning until 6 in the evening, with but a half hour for dinner, and for such small pay as we get, too.

---

No. 307. I think that eight hours would be sufficient to work for fifty cents per day. If ten hours is to be a day's work we should have more pay for it.

---

No. 308. Ten and one-half hours per day are long hours for a salary of two dollars a week.

---

No. 313. The overseers should not be permitted to use such language to girls as they do in this mill. We should have an hour for dinner instead of thirty minutes, and a half day on Saturday.

---

No. 314. As far as my judgment goes, eight hours a day would be long enough to work for the wages I receive, fifty-four cents per day. From 7 a. m. until 6 p. m. is a long time for a girl to be on her feet. I think it is about time that something be done for the benefit and welfare of female workers.

---

No. 318. Ten and a half hours a day are too long for any little girl to have to work for $2.50 per week. I would like an hour for dinner, which would give some of us time to go home for it. Above all, I would like more wages.

---

No. 337. In my judgment eight hours is long enough for any female worker to be on her feet each day and to work in such a confined place. We should get a month's vacation and get paid for it, also for the time we lose through sickness. In some parts of the United States in this business, girls get from $1.00 to $1.25 per day for the same work that I am doing for a little more than half that sum.

---

No. 342. Our hours of labor are too many for the pay we receive. If the material is poor, as is frequently the case, we are obliged to stand constantly.

---

No. 344. Ten and one-half hours per day for girls to be obliged to stand all the time in the unhealthy atmosphere of a silk mill is too long.

---

No. 356. If I had no parents, I do not see how I could get along on three dollars a week. It is scarcely enough for a girl to keep herself properly clothed. We should be better paid and have a short vacation in summer with pay.

---

No. 359. We get no vacation and if we lose only an hour it is deducted from our pay, and work ten hours per day or ten and a half hours for five days and seven on Saturday.

No. 364. I am working too hard for the pay I get, $2.25 per week. I am a spinner. If a girl is sick and asks to go home, she will be told to go home and stay there.

---

No. 375. I would suggest that 8 a. m. would be early enough to start work instead of 7. We should be allowed a rest of at least five minutes in every hour.

---

No. 461. I think it is about time that something was done for the welfare of female workers. I have been working for seven years and my wages at the present time are only fifty-four cents per day.

---

No. 530. The girls in this silk mill are "docked" for every hour they lose, not only for sickness, but if there is any breakage of machinery by which we are compelled to remain idle for an hour or so, the time is deducted from our miserable wages. Women in this mill get from $2.50 to $3.50 per week for work for which in silk mills in other cities they are paid $5.00 to $6.00 per week.

---

No. 531. We are compelled to remain in the mill sometimes from one to four hours waiting for repairs to the machinery; that is to say, we dare not leave the mill, but we are not paid for the time. This seems to me to be very unjust.

---

No. 543. What would improve our condition the most is, better pay for our work, fewer hours of labor and stools to sit on at times, for we have to stand all day now.

---

Saleswomen, Erie County.

No. 7. I think the law compelling those employing females in stores, etc., to provide seats for them, should be enforced. I also think that women who do the same work as men should be entitled to like compensation.

---

No. 50. My hours of labor each day are from 8 a. m. until 9 p. m., for which I receive the munificent salary of three dollars per week.

---

Nos. 68 to 92 inclusive are returns from the female employes of a large laundry in Erie county. The blanks were evidently all filled out by the proprietor, who kindly relieved the women from that duty and as a natural consequence, the employes are all "well pleased," as they say, with their wages and general condition.

---

Miscellaneous Female Employes, Erie County.

No. 105. Printing House Employe.—Nine hours should surely be long enough for a woman to work during the day.

---

No. 109. Booksewer.—Nine hours should constitute a working day for women.

No. 123. Cigarmaker.—I am charged twenty-five cents per month for the use of the gas with which our work-room is lighted.

---

No. 124. Cigarmaker.—I am compelled to pay twenty-five cents per month for the gas which is used in the work-room. Every other girl in the factory is obliged to pay the same sum.

---

No. 129. Boxmaker.—Ten hours is a long day for a girl to work for $2.50 per week. All other employes of this establishment join in the complaint of long hours and scant wages.

---

Miscellaneous Female Employes, Philadelphia.

No. 457. Cash Girl.—In the store where I am employed, on Eighth street, girls are compelled to spend ten and one-half hours per day in a close, unventilated basement, employed at wrapping the goods purchased. The air in this place is simply stifling. The firm is in the habit of sending girls who are hardly more than children with packages to houses of ill fame and frequently as late as 9 o'clock at night. These packages are purchases which have been made by inmates of such places. I speak from my own experience. This store should have a better toilet room for its female employes, as the one we are obliged to use now has no privacy whatever.

---

No. 463. Sewing-machine Operator.—In the store where I am employed we must sign an agreement relieving our employer from liability in case of accidents to us while at work. We are also compelled to join a society that pays certain sums weekly in cases of sickness. No matter how long one may be employed by this firm without drawing any sick benefits, if we leave the employ we forfeit all money we have paid in.

---

No. 467. Stock Girl.—My condition would be improved if I received better wages. It would be further improved if I had an opportunity to sit and rest occasionally during the day, and it would still further be improved if we had not to work ten hours and more per day.

---

No. 425. —Tailoress.—The place where I am working must be one of the "sweat-shops" about which I read in the papers. It is the first place of the kind I ever worked in, as before now I have always worked for a merchant tailor. It is a terrible place. I was one of the best paid women in the place and my pay was only seven dollars per week, but the majority of the girls who were employed could not earn more than from $3.50 to $4.50 per week of ten hours hard work per day.

---

No. 428. Embroiderer.—A Saturday half holiday would be thoroughly appreciated.

---

No. 442. Sewing-machine Operator.—I object to the beneficial society connected with this store. Frequently one is ill, but not so sick as to necessitate the services of a doctor, but still not able to work.

Under these circumstances we would get no benefits from the society but would be obliged to pay the assessments just the same. It would benefit working girls very much if there was a place at the sea shore where those of us who cannot afford to pay hotel prices could go. Now, if there was a large house where girls could be boarded at from $3.00 to $5.00 per week, their health would be greatly benefited thereby.

---

No. 445. Sewing-machine Operator.—I work on the sixth floor of the store where I am employed, and we are obliged to walk up and down the stairs, as we are not permitted to use the elevators, but some of the other employes are not restricted from using them. There are some old women and lame girls who are thus compelled to walk up and down the stairs at least twice a day. I think it would only be right and proper when our services are no longer required in the store through lack of work and we are dismissed, that we should be given some sort of a certificate. This would be a great help to us in getting employment elsewhere. Of course, I mean when women are discharged through no fault or delinquency of their own.

---

No. 446. Shirtmaker.—Girls who are so fortunate as to secure work in the large stores in Philadelphia, have very little to complain of, as everything for their comfort and convenience is done by the proprietors. It is the females who are employed in small stores who have the greatest cause for complaint. These strive to sell goods at the same rates as the larger stores and, as they have not the same facilities for doing the work, their employes are kept at starvation wages.

---

No. 447. Sewing-machine Operator.—Having been employed for a number of years with one of the best firms in Philadelphia, I have no complaint to make nor improvement in my own condition to suggest, but I think something should be done to improve the condition of the great number of sewing-machine operators in this city who labor from 7 a. m. until 6 p. m. day after day and year after year.

---

Copyist.—In many places of business in this city the working people are discharged without the slightest notice, although, perhaps, for no fault of their own, but from depression in business. I think that a week's notice should be given in all such cases.

---

No. 554. Sewing-machine Operator.—I am not at work now, but in my last situation I operated a sewing machine on men's coats. Beside me worked a man who was paid four dollars a week more than I was, for the same kind of work in quality and quantity. The excuse for this state of affairs was that the man had a family to support. I was a widow and also had a family of young children to support, and in many cases even young girls have to help support aged parents. This is no excuse at all for such injustice.

---

No. 564. Sewing-machine Operator.—I favor the cessation of all night work. I am obliged during the busy season each year to work at nights for five weeks or forfeit my situation.

No. 566. Umbrella Coverer.—We are paid by the piece for our work, and the prices range from two to seven cents each. The prices at this work have been greatly reduced. I work hard a whole week and earn only $4.50, when it should be at least $6.00. Our hours are from 8 a. m. to 5.30 p. m.

---

Female Employes in Shoe Factory, Dauphin County.

No. 6. I work by the piece and am expected to be at the factory from 7 a. m. until 6 p. m., and sometimes I have had only eight cents worth of work in that time.

---

No. 151. Managers and overseers in places where females are employed should be compelled to use proper language to the employes and treat them with the same consideration as they would ladies outside.

---

Employes in Silk Mill, Dauphin County.

No. 185. We are not paid the wages we should be for the strict accountability we are held to. If the weavers have bad material and make too much waste, they are "docked," and if absent without permission they are fined twenty-five cents. When a new girl comes in, the girl who teaches her gets one dollar if the girls stays, if not, the teacher gets nothing. If there is anything wrong with the cloth we are fined, or for any breakage. There are a great many unjust things done other than those mentioned.

---

No. 189. If we are absent from any cause other than sickness or death, we are fined twenty-five cents.

---

No. 194. A great benefit in places like this, would be to employ for foremen or overseers men who keep sober and do not use profane language to the female employes. Then we should be paid enough wages to at least support ourselves, which we do not get at the present time.

---

No. 196. I have been a worker in the silk mill since it commenced, nine years ago, and my wages have not been increased any during that time. We lose so much time from lack of material, etc., that my average falls very low, sometimes giving me not enough to live on.

---

No. 198. Girls who work in this mill are not paid the wages they should be. I have worked in it for four years, and do not get any more now than I did in the beginning. If we are sick and stay out without notifying the boss, we are fined twenty-five cents and have the day's pay taken off. We are obliged to stand all day while at work.

---

No. 199. We are expected to be at work every morning at a certain time, no matter how stormy the weather is or we will be fined twenty-five cents and sometimes on a stormy winter morning it is almost impossible to avoid being a few minutes late. I think

that we should be paid better wages. To-day I earned thirty-five cents.

---

No. 206. If we are absent sick and do not send word to the boss, we are fined twenty-five cents. We are obliged to stand all day at our work, if we sit down we are fined either twenty-five or fifty cents.

---

No. 209. What would benefit us more than anything else would be to reduce our working hours and increase our pay.

---

No. 210. I have no remarks to make as everything is lovely just at the present time, only we do not have steady work.

---

No. 211. I have one complaint to make and that is that we are forbidden to sit during working hours, at such times that our work is running smoothly, or even when we are idle entirely. This privilege would not be detrimental to our work or to our employers.

---

No. 214. If we lose a day we are fined twenty-five cents and lose the day's pay besides. Then, we are obliged to stand all day, no matter whether we are busy or not.

---

Saleswomen, Dauphin County.

No. 243. I think a woman who does the same kind of work as a man should receive the same pay, first, because she earns it; secondly, as a general thing the woman is cruelly misjudged in many cases. If she appears in a new dress occasionally there are slurs and innendoes cast at her. Then, girls, as a general thing, are more willing to help support their aged parents than men even though their salary is small.

---

No. 246. I would suggest that for the improvement of the condition of female workers, stores and other places where females are employed should receive more attention from the authorities and their toilet rooms and the condition, sanitary and otherwise, of the buildings looked after. The proper officers could find some work in some of the Harrisburg stores at present. I speak from my own experience.

---

No. 249. Women should be paid as much as men for selling goods behind the counters of stores, because they work just as hard and their hours are the same. Then, there should be better light and ventilation, respectable toilet rooms and storm doors should be used as a protection from the cold in winter for those who are obliged to stand near the doors.

---

No. 251. There should be some law for the regulation of ventilation in stores and other places where women are employed. In the store in Harrisburg where I am employed, the odor from the water closet is at times very offensive, especially to those who are employed in the basement and which will eventually undermine the health of any woman who is obliged to work near and inhale it. Better light is another essential but it cannot always be had.

No. 255. If there were a law to close stores at ten o'clock on Saturday nights it would improve the condition of female workers and give them a chance of attending church on Sunday morning. As it is a girl who is on her feet all day and half the night on Saturday is too worn out to enjoy this blessing, as she needs the time to rest for the coming week.

---

No. 276. Silk Weaver.—What in my opinion would assist silk mill operatives most, would be to have our wages increased. We should have more pay for the time and long hours of labor which we put in.

---

279. Silk Winder.—Better pay for our work would improve our condition more than anything else. I get $2.75 per week and as both my parents are dead, I have to pay $2.00 for my board, and as we are obliged to lose all time when there is a breakdown or when we are short of material, I have a hard time to get along. I like the work, but would like it better were we better paid.

---

No. 291. Silk Weaver.—We do not get paid for time lost by sickness and, worse than that, if we are sick and have no way to send word to the mill, we are fined twenty-five cents. But we are compelled to lose the time from breaks in machinery or lack of material. This does not seem to be fair or just.

---

No. 292. Silk Weaver.—In my opinion the rules of this mill are like the handle of a jug, all on one side. For instance, if a girl gets sick and is unable to report, she is liable to a fine or discharge. The amount we get per yard for weaving is entirely too small. No matter how long we are obliged to wait for material we are not allowed anything for it, but on the other hand, if we do not report promptly when wanted, we are in danger of discharge.

---

Saleswomen, Philadelphia.

No. 579. The matter of what would improve the condition of female workers is too broad a one, as, for instance, a situation and the amount of wages which would be agreeable and adequate for one woman would be distasteful and entirely inadequate for another. As for myself, I can truly say that my situation and wages are entirely agreeable to me.

---

No. 585. I think that female workers who do the same work as men should receive a like amount of wages.

---

No. 590. I cannot think it is right for a woman who is employed in a store to be compelled to join a beneficial society connected with the establishment whether she wishes to or not. Sixty cents per month is a great deal to be taken from the small pay of some of the women, whether they can afford it or not. Even if a girl were away sick for an occasional day, it would not ruin the firm to pay her for the time. Now, as regards wages, it is no wonder that so many girls are driven to ruin in their struggle to support themselves on the meagre pittance which they are paid in stores.

No. 595. The money or wages we receive for our vacation is in no sense given to us, for we earn it in the preceding holiday season by working at nights.

---

No. 613. I think for one thing our hours of labor are too long and I think that women should have as much pay as men for the same sort of work. The argument is used that it costs men more to live, but in many, if not in most cases, women have some person or persons other than themselves to look out for. In my own case I live with and help to support a widowed sister and her two children. There is too much injustice in the world and a woman who wishes to be respectable and make an honest living has many a bitter pill to swallow. But I have found by sad experience that "silence is golden," and hold my tongue and hope for better things.

---

No. 616. Shorter hours on Saturdays and at least one hour for lunch at noon would improve our condition vastly. I do not approve of the compulsory feature of the beneficial society connected with the store in which I am employed. I suppose though it is because I am never sick. But employes should not be compelled to belong to it.

---

No. 618. I have worked in the store where I am now employed since I first started to earn my own living and, I do not think there is any place in Philadelphia where the employer is kinder or more considerate of his employes' welfare.

---

No. 625. A half holiday on Saturday the year round would greatly improve the condition of my sex.

---

No. 632. More seats behind the counters with the privilege of using them would be of great benefit to working women. Then, there should be a Saturday half holiday all the year. I do not think that any girl should be asked to work for a lower salary than $5.00 per week to commence with, as low wages are a cause of many a young girl having gone to ruin.

---

No. 635. In the store in which I am employed we are treated with every consideration and kindness due to women, but as a mother my sympathy has always been with the women and children who work long hours in our mills and factories. There should be something done for them in the way of shorter hours and better pay.

---

No. 637. Closing at 5 p. m. and on Saturdays at 1 p. m. all the year would greatly improve our condition.

---

No. 646. It will, in my judgment, improve the condition of female workers if the hours of labor are shortened, and I think more and better work will be accomplished if this is done.

---

No. 660¾. For myself, I have no complaint to make; my employer, the head of the department which I am in, and all others in authority having always been most generous, kind and considerate of me.

Still, in behalf of others not so fortunately situated I think that women's wages should be rated according to their usefulness, intelligence and ability. Many women have the same or greater responsibilities than men in the care and support of families, parents, widowed mothers, and in a great many cases they themselves have been left widows with little children to take care of, so that I think in justice women should receive equal pay with men for the same work.

---

No. 666. I have no complaints to make. I have been employed in the same store for ten years and my salary has been advanced six times, one dollar per week each time. And my co-workers in the same department have fared about as well.

---

No. 667. Bookkeeper.—We frequently, in the bookkeeping department, are obliged to work at night over our books and are not paid anything extra for it. Sometimes we are given our suppers. Cases frequently occur where girls are made ill from nervous prostration and frequently the men are similarly affected.

---

No. 677. Assistant Bookkeeper.—I consider my services worth more than I receive, $3.50 per week. In fact, did I not live with my parents it would not serve to pay my board.

---

No. 681. I think employes should be paid their wages weekly, also that work should be made up in the establishment and not be sent out to sweat shops and institutions.

---

Saleswomen, Luzerne County.

No. 1. In the store where I am employed we are obliged to work every night from Thanksgiving until the following New Year without extra compensation. We are not paid when ill, neither are we paid for vacations.

---

No. 3. If there is a law compelling employers to furnish seats behind the counter for women, it should be enforced, and some attention should be paid to the lighting and ventilation of toilet rooms used by females.

---

No. 4. Several weeks before Christmas we are obliged to work from 8 a. m. to 9 p. m. and on Saturdays until 10 p. m. The Factory Inspectors should be compelled to look after the sanitary arrangements of toilet rooms in stores as well as factories.

---

No. 13. We should be provided with seats back of counters and should have a full hour for lunch at noon, and we should be paid for extra time, which we are not now. It is very hard for a woman to be on her feet continuously.

---

No. 15. We work in this store as follows: On Monday from 8 a.m. until 9.30 p. m.; Tuesday until Friday, 8 a. m. until 6 p. m.; Satur-

days from 8 a. m. until 10 p. m. We are not permitted to sit down from morning until night except at lunch time and from that time until business is over and the stock properly arranged; so that we are kept until 6.30 p. m. on days that we should be out at 6. Chairs or stools should be placed behind the counters for the use of saleswomen. We are told there is a law compelling them to be so placed; if that be the case, that law is persistently disobeyed in Wilkes-Barre.

---

No. 19. I think that no girl under fifteen years of age should be permitted to work in a store as it is the ruination of her health.

---

No. 21. If stores were closed a little earlier in the evening during the summer months it would be a great blessing and relief to saleswomen and others employed in them.

---

No. 27. I do not think our salaries are equivalent for services rendered. Every employe, male or female, should have an hour for meal time. Then during the hot weather we should have a Saturday half holiday, say from July 1 to September 15. Then it would be nice to have a comfortable place to eat our lunches, and have clean, comfortable toilet room, with a place to wash, with combs, brushes, etc. We are told that all these are provided in the large stores in Philadelphia, but such evidences of civilization and decency have not penetrated to the stores in Wilkes-Barre yet; neither is the law observed compelling employes to furnish seats for females.

---

No. 41. In the first place our hours of work are entirely too long; secondly, we should be allowed seats behind the counters for use when we are not busy with customers.

---

No. 590. Cracker Bakery Hand.—My pay is $2.75 per week, out of which I pay $2.50 for board, and I leave the public to imagine how I can dress myself decently on what I have left. I work hard and am obliged to lift barrels of crackers and cakes; if we work two hours overtime we are allowed for a half hour, but we lose a half hour from any cause, it is taken off our wages.

---

## Silk Mill Operatives, Lycoming County.

No. 1. Our work is entirely too hard for the wages we get. I work ten hours per day for $2.50 per week, and if I had no parents I would have to pay it all for my board. We are obliged to stand all day at our work. We have forty minutes at noon and are obliged to sit on the mill floor to eat our dinners.

---

No. 2. There will probably be a number of blanks handed in as if filled by weavers whose wages will be given at $1.00 to $1.25 per day. These women are not weavers but instructors, but they give their occupation as weavers by order of the foreman. The reason I say this in my private letter to you is that because of the small wages

given by some of the weavers the idea might be conveyed that they do not work steadily. My wages averaged $3.25 per week during last year. I send my blank to you personally, because we were not furnished with envelopes and because I have reason to believe the blanks turned in to the office were read by the foreman or some of the firm.

---

No. 4. Our hours of work are ten per day. If we are absent for a half day we are docked fifty cents, but are not paid for sickness or vacation. We would like to have an hour for rest at noon and a half holiday on Saturday.

---

No. 7. One great improvement at our place of employment, would be a decent place to eat our dinner. Now, we have no place to sit, except on the floor.

---

No. 8. Girls are compelled to stand during the ten working hours and also during the lunch hour, or else sit on the floor. There are about 200 girls in the department in which I am employed, and only about twenty-five seats. This condition of affairs makes it very hard for us and does not speak very well for the humanity of our employers.

---

No. 9. What would improve our condition most would be to have to work nine hours for a day's work instead of ten as now.

---

No. 15. It would be very nice and a great improvement if we could have seats or benches or something to sit on, other than the floor, to eat our lunch at noon.

---

No. 18. In this mill the time allowed at noon is too limited for lunch and rest, as it is only forty minutes.

---

No. 19. I know of no other silk mill but this where female employes are obliged to stand all day.

---

No. 23. The reason I send this blank myself is because the foreman wished the girls to send their blanks to the office after they were filled, and those that did not suit him were destroyed.

---

No. 132. I wish to say that since the blanks were distributed to the girls in this mill, those whose blanks were not turned in to the office have been treated very unkindly by those in authority over them. It would improve our physical condition, at least, were we allowed a half holiday on Saturdays. We would be willing to work the ten hours on other days if this were granted.

---

No. 134. It is shameful for any employer to ask a girl to work for less than it takes to pay her board. My pay is $2.75 per week, and if I had no parents my fate would be hard indeed.

No. 136. I do not think a weaver should earn less than a dollar a day, or rather the sum paid her per yard for weaving should enable her to earn that much. Some who are returned as weavers at that wages or more are not weavers at all, but instructors, or forewomen. Think of the injustice of imposing a fine of fifty cents on girls for being absent a half a day. Girls, too, who work by the piece and are only paid for what they earn.

---

Suspender Factory Operatives, Lycoming County.

No. 151. We have suffered greatly from cold this winter, as there is only one stove to heat a large room. Our wages are miserable; I am a piece-worker and I cannot earn more than three dollars per week.

---

No. 154. We have a half holiday every Saturday; there is a fire escape attached to the factory. The ventilation is very good. Ice is furnished in the summer, at which time it is a pleasant place to work, but it is terribly cold in winter. The wages are very low.

---

No. 156. This is a terribly cold place to work in winter. I work in a large room in which there are thirteen windows, with only one stove. It would not be so bad if we had enough work, but when we have nothing to do we are not permitted to go home. I work by the piece and I am afraid to earn as much as I might for fear of having my prices cut down.

---

No. 160. I must say that everything is made very pleasant for us; good ventilation, ice water in summer, and a Saturday half holiday, but the wages are ridiculously small. I have worked here six months and my pay is $1.50 per week, so that if I had to support myself I would starve.

---

No. 225. I speak from experience when I say that ten hours is too long for even a healthy woman to work for a day.

---

No. 229. It would improve the condition of female workers if some way could be devised to compel employers to pay something more than starvation wages. Our wages were reduced when the hard times came, on the promise that they would be restored when the times improved, but instead of being restored they were further reduced. It is an injustice to be obliged to sit sometimes an entire day with nothing to do when we should be permitted to go home.

---

No. 238. Our condition could be improved were we permitted to leave the factory when our work was completed and by not compelling us to come to the factory in the morning when there is no work ready for us, and it could be further improved were we paid for time lost through illness and for a vacation of one week in summer, and still further if the former rates of wages were restored.

---

No. 240¼. It would improve our condition greatly to permit us to

go home when there is no work for us. We are frequently detained in the factory for hours at a time for lack of work, without any compensation, and if we leave the factory we do so under penalty of dis missal.

---

Saleswomen, Lycoming County.

No. 314. In my opinion the condition of female workers will be improved when men act like men. For not every man who is called a man is one. Just so long as man considers woman inferior to him just so long will he treat her as an inferior. God never intended that a man should sit idly while his wife or daughter struggles at work, which is far too heavy for her, and for which she receives about half the pay he would for the same work. And for those employers who pay women starvation wages I have nothing but contempt. I am not advocating women's rights nor am I an advanced thinker, neither do I wish to vote, but I would like to see women get that which is honestly due them.

---

No. 324. The saleswomen in this store do not get the wages they should. We bore it patiently as we were allowed to purchase such goods as we needed at cost price. That has been done away with and we now pay twelve per cent. off the regular retail price, which tends to make our already scant wages much smaller. We think we are of the oppressed. Help us out.

---

No. 362. Tailoress.—I am working at finishing trousers for eighteen cents per dozen pairs, for which I formerly received twenty-five. I have to work very hard to earn $2.50 to $2.75 per week.

---

No. 363. Tailoress.—I receive eighteen cents per dozen for finishing trousers and I cannot, no matter how hard I work, finish more than from two dozen to two dozen and a half per day.

---

No. 364. Tailoress.—I am working at a factory where trousers are made. My pay is 55, 65 and 75 cents per dozen pairs for the different grades. The prices have been cut so much that very few women can earn five dollars per week. The building is very poorly heated and there are a great many other things that do not add to our comfort, but women who are obliged to make their own living can do nothing but bear these crosses, although at times it is hard.

---

No. 369. Sewing-machine Operator. Pants Factory.—In answer to your request to make any remarks that will, in my judgment, improve the condition of female workers, I fear that the condition of working women will never be bettered unless the law comes to our relief. Every employer tries to hire the best help for the least money and the whole story is told in this.

---

No. 370. Tailoress.—Trousers that we were formerly paid $1.50 per dozen for making, we now make for seventy-five cents, and even at these miserable wages we are obliged to furnish our sewing machine

needles. I am a good workwoman and I cannot make more than $3.00 per week. In winter the factory is so cold that it is difficult to work at all at times. Is there not a Factory Inspector in Pennsylvania?

---

No. 376. Tailoress.—Females are employed in this factory and take men's places and perform men's work at about half what men would receive. As for myself it takes all I earn to pay my board and doctor bills. If there are any means by which our employers can be compelled to pay better wages, I hope you will help us.

---

No. 516. Kindling-wood Packer.—It seems to be a great outrage to compel poor girls to tie up kindling wood for sixteen cents per hundred bundles. A girl must be stout and strong and very speedy, or she would not be able to make her salt at that price. It is very unhealthy work, as we inhale a great deal of dust and dirt which frequently causes sickness.

---

No. 550. Stitcher, Shoe Factory.—I have nothing to say against the factory only that my wages are small, $2.50 per week. I have worked in other factories and I must say that I have more privileges in this one than in any of the others. The wages are about as good as at any of the others.

---

No. 555. Shoe Factory Employe.—It would improve our condition greatly if there could be some way discovered to ventilate this factory other than by opening windows. There are about sixty people in one room and we are obliged to breathe the same air over and over again. If a window is lowered some of us get rather too much of it and are made sick and so are obliged to lay off and lose time.

---

No. 569. Stenographer.—If higher wages were paid to men and they were employed at work now performed by women, the women could remain at home and perform the household duties as it was originally intended they should do. If this could be brought about our condition would be wonderfully improved.

---

No. 573. Woolen Mill Employe.—Ten hours per day are entirely too many for a woman to be obliged to stand. My wages are only just sufficient for the payment of my board.

---

No. 575. Woolen Mill Employe.—I have worked in this mill for nearly eight years and my present wages are $3.50 per week, out of which I pay $2.50 for board. This is very small pay for a woman who is obliged to stand for ten hours every day. How can I lay by any money for sickness or other emergencies?

---

No. 589. Cake Bakery Employe.—My wages per week are $2.50 and if I had no parents I would be obliged to pay it all for board, and where my clothes would come from I do not know.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 1 | U. S., | Parents, | All, | $6 00 | Weekly, | Two, |
| 2 | U. S., | Sister, | $2 50 | 6 00 | Weekly, | One, |
| 3 | U. S., | Parents, | 3 00 | 6 00 | Weekly, | Three, |
| 4 | Canada, | Strangers, | 4 00 | 8 00 | Weekly, | Two, |
| 5 | U. S., | Parents, | None, | 6 00 | Weekly, | Three, |
| 6 | U. S., | Parents, | $3 00 | 8 00 | Weekly, | Two, |
| 7 | U. S., | Strangers, | 3 50 | 7 00 | Weekly, | Three, |
| 8 | U. S., | Keep house, | | 15 00 | Weekly, | Two, |
| 9 | U. S., | Parent, | All, | 2 50 | Weekly, | Two, |
| 10 | U. S., | Parent, | All, | 7 00 | Weekly, | Three, |
| 11 | U. S., | Parents, | None | 7 00 | Weekly, | One, |
| 12 | U. S., | Parents, | None, | 10 00 | Weekly, | Four, |
| 13 | U. S., | Parent, | $6 00 | 9 00 | Weekly, | Four, |
| 14 | U. S., | Strangers, | 3 50 | 6 00 | Weekly, | Four, |
| 15 | U. S., | Aunt, | 3 00 | 5 00 | Weekly, | Two, |
| 16 | U. S., | Parent, | 4 00 | 8 00 | Weekly, | Four, |
| 17 | U. S., | Strangers, | 5 00 | 9 00 | Weekly, | Two, |
| 18 | Canada, | Strangers, | 3 50 | 6 00 | Weekly, | One, |
| 19 | U. S., | Relatives, | 3 00 | 5 00 | Weekly, | One, |
| 20 | U. S., | Keep house, | | 10 00 | Weekly, | One, |
| 21 | U. S., | Sister, | 3 50 | 8 00 | Weekly, | Four, |
| 22 | U. S., | Strangers, | 3 00 | 8 00 | Weekly, | Four, |
| 23 | U. S., | Parent, | 3 00 | 7 00 | Weekly, | Two, |
| 24 | U. S., | Keep house, | | 10 00 | Weekly, | Two, |
| 25 | U. S., | Parents, | None, | 6 00 | Weekly, | One, |
| 26 | U. S., | Strangers, | $6 00 | 15 00 | Weekly, | Four, |
| 27 | U. S., | Parents, | 3 50 | 9 00 | Weekly, | One, |
| 28 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 29 | U. S., | Strangers, | 4 00 | 7 00 | Weekly, | Three, |
| 30 | U. S., | Parent, | 3 00 | 8 00 | Weekly, | Three, |
| 31. | U. S., | Parents, | 3 00 | 6 00 | Weekly, | Three, |
| 32 | U. S., | Parents, | 3 50 | 7 00 | Weekly, | Three, |
| 33 | U. S., | Parents, | 4 00 | 6 00 | Weekly, | Three, |
| 34 | U. S., | Guardian, | 3 50 | 7 50 | Weekly, | Three, |
| 35 | U. S., | Strangers, | 6 00 | 12 00 | Weekly, | One. |

SALESWOMEN—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9 | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 8 | No, ..... | Four weeks,..... | No. |
| ..... | 9 | Yes, ..... | Two weeks,..... | Yes. |
| $3 to $5 less per week, ..... | 10 | No, ..... | 1 and 2 months..... | No. |
| ..... | 9 | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Do not know, ..... | 8¼ | No, ..... | One week,..... | Yes. |
| As well paid as a man,..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No; do not know how much less,.. | 8¾ | No, ..... | One week,..... | Yes. |
| No men employed at my work, .. | 9½ | *No, ..... | Two weeks,..... | Yes. |
| Cannot say, ..... | 9½ | No, ..... | Two weeks,..... | Yes. |
| Same pay as a man,..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; cannot tell how much less,.. | 9 | No, ..... | Varies with trade,.. | For 2 weeks. |
| No; cannot tell how much less,.. | 9 | No, ..... | Two weeks,..... | Yes. |
| No men employed at my work, .. | 8¾ | No, ..... | One week,..... | Yes. |
| No; about half as much, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 8¾ | No, ..... | Yes; 8 to 10 weeks,. | For 2 weeks. |
| Much less, ..... | 9½ | No, ..... | Two weeks,..... | Yes. |
| ..... | 8¾ | No, ..... | Indefinite period.... | For 2 weeks. |
| No; about one-half, ..... | 8¾ | No, ..... | Indefinite period,... | For 2 weeks. |
| No, ..... ..... | 9 | No, ..... | One week,..... | Yes. |
| The same, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| The same, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No men employed at my work, .. | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Indefinite period,... | For 2 weeks. |
| Men in same dep't get $10 to $15,. | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No; about $4 per week less, ..... | 9 | No, ..... | Four weeks,..... | For 2 weeks. |
| ..... | 9 | *No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |

*If taken ill during business hours I receive pay for that day

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 36 | U. S., | Strangers, | $7 00 | $7 00 | Weekly, | One, |
| 37 | Germany, | Parent, | All, | 6 00 | Weekly, | Two, |
| 38 | U. S., | Parent, | All, | 7 00 | Weekly, | One, |
| 39 | U. S., | Parents, | $3 00 | 5 00 | Weekly, | Two, |
| 40 | U. S., | Parents, | None, | 6 00 | Weekly, | One, |
| 41 | U. S., | Strangers, | $5 00 | 8 00 | Weekly, | Two, |
| 42 | U. S., | Parents, | 3 50 | 5 00 | Weekly, | Two, |
| 43 | U. S., | Strangers, | 4 00 | 7 00 | Weekly, | Two, |
| 44 | U. S., | Strangers, | 3 50 | 6 50 | Weekly, | One, |
| 45 | U. S., | Strangers, | 4 00 | 8 00 | Weekly, | One, |
| 46 | U. S., | Parents, | 3 00 | 6 00 | Weekly, | Two, |
| 47 | U. S., | Parent, | 4 00 | 7 00 | Weekly, | Two, |
| 48 | West Indies, | Brother, | None, | 7 00 | Weekly, | One, |
| 49 | U. S., | Parents, | $3 50 | 6 00 | Weekly, | One, |
| 50 | Ireland, | Strangers, | 4 00 | 5 00 | Weekly, | Three, |
| 51 | U. S., | Strangers, | 3 50 | 6 00 | Semi-monthly, | Two, |
| 52 | Ireland, | Strangers, | 4 00 | 8 00 | Weekly, | One, |
| 53 | U. S., | Parents, | 6 00 | 10 00 | Weekly, | Three, |
| 54 | U. S., | Parents, | 3 00 | 7 00 | Weekly, | One, |
| 55 | U. S., | Parents, | 2 00 | 6 00 | Weekly, | Two, |
| 56 | U. S., | Parents, | None. | 4 00 | Weekly, | One, |
| 57 | U. S., | Strangers, | $4 00 | 7 00 | Weekly, | Three, |
| 58 | U. S., | Strangers, | 4 00 | 8 00 | Weekly, | Three, |
| 59 | U. S., | Stranger, | 4 00 | 8 00 | Weekly, | Two, |
| 60 | U. S., | Strangers, | 4 00 | 7 00 | Weekly, | One, |
| 61 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | Five, |
| 62 | U. S., | Strangers, | 4 00 | 5 00 | Weekly, | Three, |
| 63 | U. S., | Parent, | 3 00 | 6 00 | Weekly, | Three, |
| 64 | U. S., | Keep house, | | 6 00 | Weekly, | Two, |
| 65 | U. S., | Friends, | 4 00 | 13 00 | Weekly, | Two, |
| 66 | U. S., | Parent, | None, | 7 00 | Weekly, | Two, |
| 67 | U. S., | Parent, | None, | 9 00 | Weekly, | Two, |
| 68 | U. S., | Parents, | $4 00 | 8 00 | Weekly, | One, |
| 69 | Ireland, | My son, | | 11 00 | Weekly, | One, |
| 70 | U. S., | Strangers, | 4 00 | 7 00 | Weekly, | One, |

SALESWOMEN—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No; $2.00 per week less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | ..... | ..... |
| ..... | 9 | No, ..... | ..... | ..... |
| Do not know, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 8 | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 9 | Yes, ..... | Four weeks,..... | No. |
| I do not; much less, ..... | 9 | No, ..... | Indefinite period,... | No. |
| I do not know, ..... | 9 | *Yes, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | Yes, ..... | Four weeks,..... | For 2 weeks. |
| No; about $4 less per week, ..... | 10 | No. ..... | No,..... | No. |
| I do not, ..... | 10 | No. ..... | 4 to 6 weeks,..... | No. |
| No; $3 to $4 per week less, ..... | 9 | No, ..... | Four weeks,..... | No. |
| No men employed at this work,.. | 9 | No, ..... | 4 to 8 weeks,..... | No. |
| No; I do not know how much less, | 8¾ | No, ..... | 4 to 6 weeks,**..... | For 2 weeks. |
| Do not know, ..... | 9 | No, ..... | One week,..... | Yes |
| Cannot say, but think not, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No; $3 to $5 less per week, ..... | 9 | Yes, ..... | Indefinite period,... | For 2 weeks. |
| Cannot say, ..... | 8¾ | No, ..... | Two weeks,..... | Yes. |
| No; a great deal less. ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | One week,..... | Yes. |
| A man would receive $12, ..... | 9 | No. ..... | Two weeks,..... | Yes. |
| I think not, ..... | 9 | No, ..... | Indefinite period,... | For 2 weeks. |
| No males employed, ..... | 9 | No, ..... | One week,..... | Yes. |
| About $3 less per week, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Indefinite period, ... | No. |
| ..... | 9 | No, ..... | ..... | ..... |
| I believe less, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| Do not know what difference, ... | 9 | No, ..... | Two weeks,..... | Yes. |
| I get more than some men, ..... | 9 | No. ..... | Four weeks,..... | For 2 weeks. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| From $5 to $10 less per week, ... | 10 | No. ..... | Two weeks,..... | Yes. |

* If for a few days.
** After one year's service in store, we are allowed one week's vacation with pay: after two or more years, two weeks.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 71 | U. S., | Parents, | $5 00 | $15 00 | Weekly, | Three, |
| 72 | U. S., | Parents, | All, | 6 00 | Weekly, | Three, |
| 73 | U. S., | Strangers, | $3 30 | 6 00 | Weekly, | One, |
| 74 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | Three, |
| 75 | U. S., | Parents, | All, | 11 00 | Weekly, | One, |
| 76 | U. S., | Parents, | $3 00 | 6 00 | Weekly, | Four, |
| 77 | U. S., | Parents, | 3 00 | 7 00 | Weekly, | Three, |
| 78 | U. S., | Strangers, | 4 00 | 7 00 | Weekly, | Three, |
| 79 | U. S., | Parents, | All, | 6 00 | Weekly, | One, |
| 80 | U. S., | Parents, | All, | 5 00 | Weekly, | Two, |
| 81 | U. S., | Sister, | $2 00 | 8 00 | Weekly, | Three, |
| 82 | U. S., | Parent, | 3 00 | 6 00 | Weekly, | Four, |
| 83 | Ireland, | Brother, | 3 00 | 6 00 | Weekly, | One, |
| 84 | U. S., | Parent, | All, | 7 00 | Weekly, | Five, |
| 85 | U. S., | Strangers, | $4 00 | 8 00 | Weekly, | Five, |
| 86 | U. S., | Strangers, | 5 00 | 9 00 | Weekly, | One, |
| 87 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | Two, |
| 88 | U. S., | Parents, | 5 00 | 10 00 | Weekly, | Four, |
| 89 | U. S., | Sister, | 3 00 | 7 00 | Weekly, | Three, |
| 90 | U. S., | Relative, | 4 00 | 6 00 | Weekly, | Two, |
| 91 | U. S., | Strangers, | 4 00 | 6 25 | Weekly, | Four, |
| 92 | U. S., | Parents, | 3 00 | 7 00 | Weekly, | One, |
| 93 | U. S., | Relatives, | 5 25 | 15 00 | Weekly, | Four, |
| 94 | U. S., | By myself, | | 10 00 | Weekly, | Three, |
| 95 | U. S., | Parents, | None, | 7 00 | Weekly, | Two, |
| 96 | U. S., | Parents, | $3 50 | 5 50 | Weekly, | Three, |
| 97 | U. S., | Strangers, | 3 50 | 6 00 | Weekly, | One, |
| 98 | U. S., | Parents, | 5 00 | 8 00 | Weekly, | Two, |
| 99 | U. S., | Keep house, | | 5 00 | Weekly, | Two, |
| 100 | U. S., | Parent, | | 6 00 | Weekly, | Three, |
| 101 | U. S., | Relative, | 3 00 | 6 00 | Weekly, | One, |
| 102 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | Two, |
| 103 | U. S., | Parents, | 4 00 | 8 00 | Weekly, | One, |
| 104 | U. S., | Strangers, | 5 00 | 7 00 | Weekly, | Three, |
| 105 | U. S., | Strangers, | 3 50 | 6 00 | Weekly, | Six, |
| 106 | U. S., | Parent, | | 10 00 | Weekly, | Four, |

SALESWOMEN—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| Do not know what men receive,.. | 9 | No, ..... | Indefinite period,... | For 1 week. |
| ..... | 8¾ | No, ..... | Two weeks,..... | Yes. |
| No; do not know how much less,.. | 9 | No, ..... | Two weeks,..... | Yes. |
| From $2 to $5 per week less,..... | 9 | No, ..... | Two weeks,..... | Yes. |
| Cannot answer, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| Cannot answer, ..... | 9 | No, ..... | Yes, ..... | No. |
| Very much less, ..... | 9 | No, ..... | Indefinite period,... | For 2 weeks. |
| Do not know, ..... | 9 | No, ..... | Indefinite period,... | No. |
| Do not know, ..... | 9 | ..... | ..... | ..... |
| Do not know, ..... | 9 | No, ..... | One week,..... | Yes. |
| About one-half less, ..... | 10 | Yes, ..... | One week,..... | Yes. |
| About 50 per cent. less, ..... | 9 | Yes,. ..... | One month,..... | No. |
| A man would get $12 to $15, ..... | 9 | No, ..... | Indefinite period,... | For 1 week |
| Have no idea, ..... | 9 | No, ..... | Indefinite period,... | No. |
| Do not know, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| None employed at my work, ..... | 10 | No, ..... | Indefinite period,... | No. |
| No; $3 to $5 per week less, ..... | 9 | No, ..... | Two weeks,..... | One week. |
| No; do not know how much less,.. | 10 | No, ..... | Two weeks,..... | Yes. |
| Men are not employed here, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes |
| No; from $5 to $10 per week less,. | 9 | No, ..... | Two weeks,..... | Yes. |
| No, I do not, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No; about $3 per week less,..... | 9 | No, ..... | Ten days,..... | No. |
| ..... | 9 | ‖No, ..... | Indefinite period,... | For 2 weeks. |
| ..... | 9½ | ‖No, ..... | Two weeks,..... | Yes. |
| No, ..... ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | One week,..... | Yes. |
| I do not, ..... | 10 | No, ..... | Indefinite period,... | For 2 weeks. |
| No men are employed, ..... | 9 | No, ..... | Two weeks,..... | One week. |
| Do not know, ..... | 9 | No, ..... | Two weeks,..... | One week. |
| No; a man w'd receive $12 to $15. | 9 | No, ..... | Two weeks,..... | Yes. |
| No; a man would get $10 to $12,... | 9 | ‖No, ..... | Indefinite period,... | Yes.** |
| No; $4 per week less, ..... | 9 | No. ..... | One week,..... | Yes. |
| ..... | 8½ | No, ..... | Indefinite period,... | For 2 weeks. |

‖ There is a relief fund in this store; those who belong to it get $5.00 per week sick benefit if sick longer than one week.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 107 | U. S., | Strangers, | $4 00 | $8 00 | Weekly, | Two, |
| 108 | U. S., | Parents, | | 9 00 | Weekly, | Two, |
| 109 | U. S., | Parent, | 4 25 | 6 00 | Weekly, | Two, |
| 110 | U. S., | Parents, | All, | 6 00 | Weekly, | Three, |
| 111 | U. S., | Parents, | $3 50 | 5 00 | Weekly, | Three, |
| 112 | U. S., | Strangers, | 4 50 | 9 00 | Weekly, | Two, |
| 113 | U. S., | Parents, | 2 00 | 6 00 | Weekly, | Three, |
| 114 | U. S., | Strangers, | 5 00 | 6 00 | Weekly, | Six, |
| 115 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 116 | U. S., | Parents, | 3 00 | 6 00 | Weekly, | Four, |
| 117 | U. S., | Keep house, | | 12 00 | Weekly, | Two, |
| 118 | U. S., | Parents, | 4 00 | 8 00 | Weekly, | Three, |
| 119 | Ireland, | Parent, | 3 25 | 7 00 | Weekly, | Two, |
| 120 | U. S., | Guardian, | 3 00 | 6 00 | Weekly, | Two, |
| 121 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 122 | U. S., | Parent, | 6 00 | 10 00 | Weekly, | Three, |
| 123 | U. S., | Parents, | 5 00 | 6 00 | Weekly, | Three, |
| 124 | England, | Sister, | 4 00 | 8 00 | Weekly, | Five, |
| 125 | U. S., | Parents, | | 6 00 | Weekly, | Three, |
| 126 | U. S., | Parents, | | 8 00 | Weekly, | One, |
| 127 | U. S., | Parents, | All, | 4 00 | Weekly, | One, |
| 128 | U. S., | Parents, | All, | 9 00 | Weekly, | One, |
| 129 | U. S., | Parents, | $3 00 | 5 00 | Weekly, | Two, |
| 130 | U. S., | Parents, | | 7 00 | Weekly, | One, |
| 131 | U. S., | Keep house, | | 8 00 | Weekly, | Two, |
| 132 | U. S., | Stranger, | 3 50 | 6 50 | Weekly, | One, |
| 133 | U. S., | Parent, | All, | 6 00 | Weekly, | One, |
| 134 | U. S., | Parents, | All, | 6 00 | Weekly, | One, |
| 135 | U. S., | Parents, | $3 50 | 3 50 | Weekly, | Two, |
| 136 | U. S., | Parents, | All, | 5 00 | Weekly, | Three, |
| 137 | U. S., | Parent, | $4 00 | 5 00 | Weekly, | One, |

SALESWOMEN—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| Do not know, ..... | 9 | No, ..... | Four weeks,..... | No. |
| Do not know, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Do not know, ..... | 9 | No, ..... | ..... | ..... |
| ..... | 9 | No, ..... | Two weeks,**..... | Yes. |
| Not able to state, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No; I do not; not able to state, | 9 | No, ..... | Four weeks,..... | No. |
| No; men are paid twice as much, | 9 | No, ..... | Four weeks,..... | No. |
| ..... | 8¼ | No, ..... | Two weeks,..... | Yes. |
| Do not know, ..... | 10 | Yes, ..... | Three weeks,..... | No. |
| Yes; I get the same wages,..... | 9 | Yes,. ..... | Two weeks,**..... | Yes. |
| No; much less, ..... | 9 | No, ..... | Two weeks,**..... | Yes. |
| No; men are paid much more,.. | 10 | No. ..... | Two weeks,**..... | Yes. |
| Do not know, ..... | 9 | No, ..... | Two weeks,**..... | Yes. |
| Do not know, ..... | 9 | No. ..... | Two weeks,**..... | Yes. |
| Yes; for the same work,..... | 9 | No. ..... | Two weeks,**..... | Yes. |
| No; I do not know how much less. | 9 | No. ..... | Two weeks,..... | No. |
| Do not know, ..... | 9 | No, ..... | Two weeks,**..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| Men not employed at my work.. | 9 | No, ..... | Two weeks,..... | Yes. |
| No; not nearly as much, ..... | 9 | No, ..... | One week,..... | Yes. |
| No; men receive higher wages,.. | 9 | ‖No, ..... | Two weeks,..... | Yes. |
| I do not know, ..... | 9 | Yes,. ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,**..... | Yes. |
| No; a man would get $12, ..... | 9 | No, ..... | Two weeks,..... | One week. |
| About the same, ..... . | 9 | No. ..... | No, ..... | ..... |
| I do not know, ..... | 8½ | No, ..... | Two weeks,**..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,**..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,**..... | Yes. |
| No; about half as much, ..... | 9 | No, ..... | Two weeks,**..... | Yes. |
| No; $4 per week less, ..... | 9 | No, ..... | One week,..... | Yes. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 138 | U. S., ..... | Keep house, ..... | ..... | $5 00 | Weekly,..... | Four, ... |
| 139 | U. S., ..... | Strangers, ..... | $4 00 | 7 00 | Weekly,..... | Two, ... |
| 140 | U. S., ..... | Strangers, ..... | 3 50 | 7 00 | Weekly,..... | Three, .. |
| 141 | U. S., ..... | Parents, ..... | 3 00 | 6 00 | Weekly,..... | One, .... |
| 142 | England, ..... | Parent, ..... | All, | 5 00 | Weekly,..... | One, .... |
| 143 | U. S., ..... | Strangers, ..... | $3 50 | 6 00 | Weekly,..... | One, .... |
| 144 | U. S., ..... | Strangers, ..... | 3 50 | 7 00 | Weekly,..... | Two, ... |
| 145 | Ireland, ..... | Parents, ..... | 5 00 | 6 00 | Weekly,..... | Two, ... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 146 | U. S., ..... | Strangers, ..... | $3 00 | $4 50 | Weekly,..... | One, .... |
| 147 | U. S., ..... | Parents, ..... | 3 50 | 11 00 | Weekly,..... | One, .... |
| 148 | U. S., ..... | Parents, ..... | All, | 6 00 | Weekly,..... | One, .... |
| 149 | U. S., ..... | Strangers, ..... | $4 00 | 6 00 | Weekly,..... | Two, ... |
| 150 | U. S., ..... | Parents, ..... | All, | 4 00 | Weekly,..... | One, .... |
| 151 | U. S., ..... | Strangers, ..... | $6 00 | 15 00 | Weekly,..... | Three, .. |
| 152 | U. S., ..... | Strangers, ..... | 3 00 | 9 00 | Weekly,..... | Four, ... |
| 153 | U. S., ..... | Strangers, ..... | 3 00 | 8 00 | Monthly,..... | Five, .. |
| 154 | U. S., ..... | Parents, ..... | 3 00 | 5 00 | Weekly,..... | Three, .. |
| 155 | U. S., ..... | Strangers, ..... | 3 00 | 9 00 | Semi-monthly, ..... | Three, .. |
| 156 | U. S., ..... | Strangers, ..... | 7 00 | 7 00 | Semi-monthly, ..... | One, .... |
| 157 | U. S., ..... | Strangers, ..... | 3 00 | 4 00 | Weekly,..... | Three, .. |
| 158 | U. S., ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | One, .... |
| 159 | U. S., ..... | Parents, ..... | 3 00 | 3 00 | Weekly,..... | One, .... |
| 160 | U. S., ..... | Parents, ..... | 3 00 | 3 00 | Weekly,..... | One, .... |
| 161 | U. S., ..... | Parents, ..... | ..... | 6 00 | Weekly,..... | Two, ... |
| 162 | England, ..... | Parents, ..... | ..... | 3 00 | Weekly,..... | One, .... |
| 163 | U. S., ..... | Parents, ..... | None, | 5 00 | Weekly,..... | Two, ... |
| 164 | U. S., ..... | Strangers, ..... | $4 00 | 8 00 | Weekly,..... | One, .... |
| 165 | U. S., ..... | Parents, ..... | 7 50 | 12 00 | Weekly,..... | One, .... |
| 165½ | U. S., ..... | ..... | 3 00 | 10 00 | Weekly,..... | One, .... |

## CASHIERS—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work. If less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation. If so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| Do not know, ..... | 9 | No, ..... | ..... | ..... |
| Do not know, ..... | 9 | No, ..... | One week,..... | Yes. |
| Cannot tell, ..... | 9 | No, ..... | Two weeks,..... | No. |
| Don't know, ..... | 9 | *Yes, ..... | Two weeks,..... | One week. |
| I do not know, ..... | 9 | *Yes, ..... | Indefinite period,... | One week. |
| Do not know, ..... | 9 | *Yes, ..... | One week,..... | Yes. |
| ..... | 9 | *Yes, ..... | No, ..... | ..... |
| No, ..... ..... | 9 | No, ..... | Two weeks,..... | Yes. |

## CLERKS—PHILADELPHIA.

| | | | | |
|---|---|---|---|---|
| ..... | 9 | Yes, ..... | Two weeks,..... | Yes. |
| No; not as much, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| It is not a man's position, ..... | 9 | No, ..... | Indefinite period,... | One week. |
| Yes, ..... ..... | 9 | No, ..... | Indefinite period,... | For 2 weeks. |
| ..... | 9 | No, ..... | Indefinite period,... | For 2 weeks. |
| No; $11 per week less, ..... | 8 | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 9 | Yes,. ..... | One week,..... | Yes. |
| Yes, ..... ..... | 9 | Yes,. ..... | Two weeks,..... | Yes. |
| No; $10 to $15 per week less, .... | 8 | ..... | Yes; indefinite,..... | No. |
| ..... | 12 | No, ..... | Yes; two weeks,.... | Yes. |
| No, ..... ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 11 | Yes, ..... | Indefinite period, ... | No. |
| ..... | 9½ | No, ..... | Two weeks,..... | One week. |
| Yes, ..... | 9 | No, ..... | Indefinite, ..... | No. |
| Yes, ..... | 9 | No, ..... | Indefinite, ..... | No. |
| ..... | 10 | No, . ..... | Two weeks,..... | Yes. |
| ..... | 9½ | No, ..... | Two weeks,..... | No. |
| ..... | 9½ | ..... | ..... | ..... |
| ..... | 8½ | No, ..... | Two weeks,..... | Yes. |
| ..... | 8½ | No, ..... | Two weeks,..... | Yes. |
| ..... | 8 | No, ..... | Indefinite, ..... | Two weeks. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 166 | U. S., ..... | Parents, ..... | All, | $3 50 | Weekly,..... | One, .... |
| 167 | U. S., ..... | Strangers, ..... | $3 00 | 5 00 | Weekly,..... | ..... |
| 168 | U. S., ..... | Strangers, ..... | 4 50 | 6 00 | Weekly,..... | Four, ... |
| 169 | U. S., ..... | Strangers, ..... | 4 50 | 8 00 | Weekly,..... | Two, ... |
| 170 | U. S., ..... | Parents, ..... | ..... | 8 00 | Weekly,..... | Two, ... |
| 171 | U. S., ..... | Strangers, ..... | 2 50 | 7 00 | Weekly,..... | Four, ... |
| 172 | U. S., ..... | Sister, ..... | 3 00 | 8 00 | Weekly,..... | Three, .. |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 173 | U. S., ..... | Parents, ..... | $3 00 | $6 00 | Weekly,..... | Three, .. |
| 174 | U. S., ..... | Strangers, ..... | ..... | 8 00 | Weekly,..... | ..... |
| 175 | Ireland, ..... | Strangers, ..... | 3 00 | 7 50 | Daily,..... | One, .... |
| 176 | U. S., ..... | Strangers, ..... | 3 50 | 6 00 | Daily,..... | ..... |
| 177 | U. S., ..... | Strangers, ..... | 3 50 | 4 00 | Weekly,..... | One, .... |
| 178 | Ireland, ..... | Strangers, ..... | 3 50 | 6 00 | Weekly,..... | One, .... |
| 179 | U. S., ..... | Strangers, ..... | 3 50 | 5 00 | Weekly,..... | Three, .. |
| 180 | U. S., ..... | Strangers, ..... | 4 50 | ..... | ..... | Three, .. |
| 181 | Ireland, ..... | Strangers, ..... | 3 00 | 5 50 | Weekly,..... | Three, .. |
| 182 | New Brunswick, .. | Strangers, ..... | 3 50 | 6 00 | ..... | Two, .... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 183 | U. S., ..... | Strangers, ..... | $5 00 | $10 00 | Weekly,..... | One, .... |
| 184 | U. S., ..... | Myself, ..... | ..... | 17 50 | Monthly,..... | One, .... |
| 185 | U. S., ..... | Myself, ..... | ..... | 15 00 | Monthly,..... | Two, ... |
| 186 | Canada, ..... | Strangers, ..... | 3 50 | 8 00 | Weekly,..... | ..... |
| 187 | U. S., ..... | Strangers, ..... | 4 00 | 10 00 | Weekly,..... | Three, .. |
| 188 | U. S., ..... | Strangers, ..... | 3 50 | 4 50 | Semi-monthly, ..... | One, .... |
| 189 | U. S., ..... | Strangers, ..... | 3 00 | 6 00 | Weekly,..... | Three, .. |
| 190 | U. S., ..... | Parents, ..... | 3 00 | 8 00 | Weekly,..... | Three, .. |

## MILLINERS—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work. If less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9 | ..... | No. | |
| ..... | 9 | No, ..... | ..... | No. |
| ..... | 8 | No, ..... | Two weeks,..... | No. |
| ..... | 10 | ..... | ..... | ..... |
| From $6 to $8 less per week,..... | 9 | ..... | Indefinite, ..... | No. |
| ..... | 10 | No. ..... | Indefinite, ..... | No. |
| About $6 per week less, ..... | 9¼ | No, ..... | Indefinite, ..... | No. |

## SEAMSTRESSES AND DRESSMAKERS—PHILADELPHIA.

| | | | | |
|---|---|---|---|---|
| ..... | 9 | No, ..... | Indefinite, ..... | No. |
| Yes, ..... ..... | 12 | No, ..... | Indefinite, ..... | No. |
| ..... | 10 | No, ..... | ..... | ..... |
| Certainly; no, ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 8 | No, ..... | No. | |
| ..... | 14 | No, ..... | Five weeks, ..... | No. |
| ..... | 9 | No, ..... | One-half year, ..... | No. |
| One-half less, ..... | 14 | No, ..... | Yes, ..... | No. |
| $15 per week less, ..... | 10 | No, ..... | 2 to 3 months, ..... | No. |
| ..... | 8 | No, ..... | Yes, ..... | No. |

## STENOGRAPHER, TYPEWRITERS AND COPYISTS—PHILADELPHIA.

| | | | | |
|---|---|---|---|---|
| Yes, ..... ..... | 6 | ..... | Six weeks, ..... | No. |
| Yes, ..... ..... | 7 | Yes, ..... | Two weeks,..... | Yes. |
| $15 to $40 per month less, ..... | 7 | Yes, ..... | Two weeks,..... | Yes. |
| No, ..... | 8½ | Yes, ..... | 2 to 6 weeks,..... | No. |
| No, ..... | 8 | Yes, ..... | Three weeks,..... | One week. |
| $10 per week more, ..... | 10 | No. ..... | ..... | No. |
| $200 per year less, ..... | 8½ | No, ..... | Two weeks,..... | No. |
| Yes, ..... | 9 | No. ..... | Two weeks,..... | Yes. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 191 | U. S., ..... | Strangers, ..... | $3 00 | $4 50 | Weekly, ..... | One, .... |
| 192 | U. S., ..... | Strangers, ..... | 3 00 | 6 50 | Weekly, ..... | Three, .. |
| 193 | U. S., ..... | Strangers, ..... | 3 00 | 5 00 | Weekly, ..... | One, .... |
| 194 | U. S., ..... | Strangers, ..... | 4 00 | 7 00 | Semi-monthly, ..... | One, .... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 631 | U. S., ..... | Parents, ..... | ..... | $7 00 | Semi-monthly, ..... | One, .... |
| 632 | U. S., ..... | Sister, ..... | $3 50 | 8 00 | Semi-monthly, ..... | Two, .. |
| 633 | U. S., ..... | Parents, ..... | 3 50 | 6 50 | Semi-monthly, ..... | One, .... |
| 634 | U. S., ..... | Parents, ..... | 5 00 | 8 00 | Semi-monthly, ..... | One, .... |
| 635 | U. S., ..... | Keeping house, .... | ..... | 8 00 | Semi-monthly, ..... | One, .... |
| 636 | U. S., ..... | Parents, ..... | ..... | 11 00 | Semi-monthly, ..... | Two, . |
| 637 | U. S., ..... | Friends, ..... | ..... | ..... | Semi-monthly, ..... | Two, ... |
| 638 | U. S., ..... | Sister, ..... | ..... | 9 00 | Semi-monthly, ..... | Three, .. |
| 639 | U. S., ..... | Aunt, ..... | 4 50 | 9 00 | Semi-monthly, ..... | One, .... |
| 640 | U. S., ..... | Parents, ..... | 4 00 | 6 50 | Semi-monthly, ..... | One, .... |
| 641 | U. S., ..... | Strangers, ..... | 4 00 | 6 00 | Semi-monthly, ..... | One, .... |
| 642 | U. S., ..... | Parents, ..... | 3 50 | 5 50 | Semi-monthly, ..... | One, .... |
| 643 | U. S., ..... | Parents, ..... | ..... | ..... | Semi-monthly, ..... | One, ... |
| 644 | U. S., ..... | Strangers, ..... | 3 25 | 7 00 | Semi-monthly, ..... | One, .... |
| 645 | U. S., ..... | Relatives, ..... | 4 00 | 8 00 | Semi-monthly, ..... | Four, ... |
| 646 | U. S., ..... | Strangers, ..... | ..... | 8 00 | Semi-monthly, ..... | Three, .. |
| 647 | U. S., ..... | Strangers, ..... | 5 00 | 8 50 | Weekly, ..... | One, .... |
| 648 | U. S., ..... | Parents, ..... | ..... | 11 00 | Semi-monthly, ..... | One, .... |
| 649 | U. S., ..... | Strangers, ..... | 3 00 | 6 00 | Semi-monthly, ..... | One, .... |
| 650 | U. S., ..... | Parents, ..... | ..... | 9 00 | Semi-monthly, ..... | Two, ... |
| 651 | U. S., ..... | Grand-parents, ..... | ..... | 5 00 | Semi-monthly, ..... | One, .... |
| 652 | U. S., ..... | Strangers, ..... | 3 50 | 7 50 | Semi-monthly, ..... | Two, ... |
| 653 | U. S., ..... | Strangers, ..... | 5 00 | 8 00 | Semi-monthly, ..... | Three, .. |
| 654 | U. S., ..... | Parents, ..... | ..... | 4 00 | Semi-monthly, ..... | One, .... |
| 655 | U. S., ..... | Parents, ..... | 3 00 | 7 00 | Semi-monthly, ..... | Four, ... |
| 656 | U. S., ..... | Parents, ..... | ..... | ..... | Semi-monthly, ..... | Two, ... |
| 657 | U. S., ..... | Parents, ..... | 4 00 | 7 00 | Semi-monthly, ..... | Two, .. |
| 658 | U. S., ..... | Parents, ..... | ..... | 7 00 | Semi-monthly, ..... | One, .... |
| 659 | U. S., ..... | Parents, ..... | ..... | 6 50 | Semi-monthly, ..... | One, .... |

## PRINTING OFFICE—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9½ | No, ..... | Indefinite, ..... | No. |
| ..... | 9½ | No, ..... | One week, ..... | No. |
| $2 per week less, ..... | 10 | No, ..... | Two weeks, ..... | No. |
| Yes, ..... | 11 | No, ..... | No. | |

## SALESWOMEN—PHILADELPHIA.

| | | | | |
|---|---|---|---|---|
| No; at least $3 less, ..... | 10 | No, ..... | Two weeks, ..... | Yes. |
| ..... | 10 | No, ..... | Two weeks, ..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks, ..... | Yes. |
| ..... | 10 | No, ..... | Two weeks, ..... | Yes. |
| No; from $3 to $4 less, ..... | 9¼ | No, ..... | Two weeks, ..... | Yes. |
| ..... | 10 | No, ..... | Two weeks, ..... | Yes. |
| No, ..... | 10 | No, ..... | Two weeks, ..... | Yes. |
| ..... | 10 | No, ..... | Two weeks, ..... | Yes. |
| No; from $3 to $5 less, ..... | 9 | No, ..... | Two weeks, ..... | Yes. |
| ..... | 10 | No, ..... | Two weeks, ..... | Yes. |
| ..... | 10 | No, ..... | Two weeks, ..... | Yes. |
| ..... | 10 | No, ..... | Two weeks, ..... | Yes. |
| ..... | 9 | No, ..... | Two weeks, ..... | Yes. |
| ..... | 10 | No, ..... | Two weeks, ..... | Yes. |
| No; about one-half, ..... | 9¼ | No, ..... | Two weeks, ..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks, ..... | Yes. |
| ..... | 10 | No, ..... | Two weeks, ..... | Yes. |
| ..... | 10 | Yes, ..... | Two weeks, ..... | Yes. |
| ..... | 10 | No, ..... | Two weeks, ..... | Yes. |
| No; less, ..... | 10 | No, ..... | Two weeks, ..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks, ..... | Yes. |
| About the same, ..... | 10 | No, ..... | Two weeks, ..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks, ..... | Yes. |
| ..... | 5 | No, ..... | Two weeks, ..... | P'd 1 week. |
| No, ..... | 9¼ | No, ..... | Two weeks, ..... | Yes. |
| ..... | 9 | No, ..... | Two weeks, ..... | Yes |
| ..... | 9¼ | No, ..... | Two weeks, ..... | Yes. |
| No, ..... | 9 | No, ..... | Two weeks, ..... | Yes. |
| ..... | 10 | Partly, ..... | Two weeks, ..... | Yes. |

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 660 | U. S., | Parents, | $3 50 | $7 00 | Semi-monthly, | Two, |
| 660¼ | U. S., | Relatives, | | 7 50 | Semi-monthly, | One, |
| 660½ | U. S., | Strangers, | 3 50 | 8 50 | Semi-monthly, | One, |
| 660¾ | U. S., | Parents, | 8 00 | 10 00 | Semi-monthly, | One, |
| 601 | U. S., | Parents, | 3 50 | 9 00 | Semi-monthly, | One, |
| 602 | U. S., | Parents, | 3 00 | 5 00 | Semi-monthly, | One, |
| 603 | U. S., | Parents, | 2 50 | 5 50 | Semi-monthly, | One, |
| 604 | U. S., | Strangers, | 5 00 | 9 00 | Semi-monthly, | Two, |
| 605 | U. S., | Parents, | | 6 50 | Semi-monthly, | One, |
| 606 | U. S., | Strangers, | 3 25 | 8 00 | Semi-monthly, | One, |
| 607 | U. S., | Parents, | | 8 00 | Semi-monthly, | Two, |
| 608 | U. S., | Parents, | 3 50 | 8 50 | Semi-monthly, | One, |
| 609 | U. S., | Friends, | 4 25 | 10 00 | Semi-monthly, | Two, |
| 610 | U. S., | Parents, | | 10 00 | Semi-monthly, | Four, |
| 611 | U. S., | Sisters, | 5 00 | 10 00 | Semi-monthly, | Three, |
| 612 | U. S., | Parents, | 7 00 | 8 00 | Semi-monthly, | One, |
| 613 | U. S., | Sister, | 4 00 | 9 00 | Semi-monthly, | Two, |
| 614 | U. S., | Parents, | | 8 00 | Semi-monthly, | Three, |
| 615 | U. S., | Parents, | 3 00 | 6 50 | Semi-monthly, | One, |
| 616 | U. S., | Parents, | | 4 50 | Semi-monthly, | One, |
| 617 | U. S., | Parents, | | 5 00 | Semi-monthly, | One, |
| 618 | Canada, | Parents, | | 11 00 | Semi-monthly, | One, |
| 619 | U. S., | Parents, | 3 00 | 8 00 | Semi-monthly, | One, |
| 620 | U. S., | Strangers, | 3 00 | 9 00 | Semi-monthly, | Two, |
| 621 | U. S., | Parents, | 5 00 | 9 00 | Semi-monthly, | One, |
| 622 | U. S., | Brothers, | 4 00 | 7 00 | Semi-monthly, | Three, |
| 623 | Ireland, | Parents, | | 8 00 | Semi-monthly, | One, |
| 624 | U. S., | Parents, | 3 50 | 5 00 | Semi-monthly, | One, |
| 625 | U. S., | Parents, | | 6 50 | Semi-monthly, | One, |
| 626 | U. S., | Friends, | 3 00 | 7 50 | Semi-monthly, | Two, |
| 627 | U. S., | Parents, | | 8 50 | Semi-monthly, | Two, |
| 628 | U. S., | Parents, | | 7 00 | Semi-monthly, | One, |
| 629 | U. S., | Relatives, | 3 00 | 5 00 | Semi-monthly, | One, |
| 630 | U. S., | Parents, | 3 50 | 7 00 | Semi-monthly, | Two, |
| 541 | U. S., | W. C. A., | 3 50 | | Semi-monthly, | Two, |
| 542 | U. S., | Strangers, | 5 00 | 6 00 | Weekly, | Three, |

SALESWOMEN—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No; less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; less than one-half, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks,..... | No. |
| ..... | 8¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| No; $7 less, same work, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; about one-half, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No; about $5 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; about $1.50 less, ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| No; about $5 less, ..... | 8 | Yes, ..... | Two weeks,..... | Yes. |
| No; less than half, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; $3 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; from $8 to $13 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; $2 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| The same, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| The same, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| The same, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; one-half less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| About the same, ..... | 7 | Yes, ..... | Two weeks,..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 543 | U. S., | Parents, | | $3 00 | Weekly, | Three, |
| 544 | Canada, | Sister, | $3 00 | | Weekly, | Three, |
| 545 | U. S., | Parents, | | 3 50 | Weekly, | Three, |
| 546 | Germany, | Parents, | | 3 00 | Weekly, | One, |
| 547 | U. S., | W. C. A., | 4 00 | 8 00 | Monthly, | Seven, |
| 548 | U. S., | Strangers, | 5 00 | 9 37½ | Monthly, | Three, |
| 549 | U. S., | Strangers, | 7 25 | 18 00 | Weekly, | Two, |
| 550 | U. S., | Strangers, | 5 00 | 8 00 | Weekly, | Four, |
| 551 | U. S., | Strangers, | 3 00 | 5 00 | Weekly, | One, |
| 552 | U. S., | W. C. A., | 4 00 | 8 00 | Weekly, | One, |
| 553 | U. S., | Strangers, | 4 50 | 9 00 | Weekly, | One, |
| 554 | U. S., | Strangers, | 3 50 | 3 75 | Monthly, | Two, |
| 555 | U. S., | Strangers, | 3 50 | 5 00 | Weekly, | One, |
| 556 | U. S., | W. C. A., | 3 50 | 6 00 | Semi-monthly, | Three, |
| 557 | U. S., | Relatives, | 1 25 | 2 50 | Weekly, | Two, |
| 558 | U. S., | W. C. A., | 4 50 | 9 00 | Weekly, | Two, |
| 559 | U. S., | Strangers, | 3 00 | 5 00 | Semi-monthly, | |
| 560 | U. S., | Strangers, | 4 00 | 7 50 | Weekly, | Several, |
| 561 | U. S., | Strangers, | 5 00 | 10 00 | Monthly, | Seven, |
| 562 | U. S., | Strangers, | 4 00 | 7 00 | Weekly, | Two, |
| 563 | U. S., | Strangers, | 5 00 | 20 00 | Monthly, | Three, |
| 564 | U. S., | Strangers, | 3 00 | 6 00 | Weekly, | Four, |
| 565 | Prussia, | Parents, | | 12 00 | Weekly, | One, |
| 566 | U. S., | Parents, | | 3 90 | Semi-monthly, | Two, |
| 567 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | Two, |
| 568 | U. S., | Parents, | 5 00 | 10 00 | Weekly, | Three, |
| 569 | U. S., | Parents, | 3 00 | 8 00 | Weekly, | One, |
| 570 | France, | Parents, | | 15 00 | Weekly, | Three, |
| 570½ | U. S., | Parents, | 3 00 | 3 50 | Weekly, | Two, |
| 570¾ | U. S., | Parents, | | 2 50 | Weekly, | Two, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 511 | U. S., | Parent, | $3 00 | $4 00 | Semi-monthly, | Two, |
| 512 | U. S., | Parent, | 3 00 | 7 00 | Semi-monthly, | Three, |
| 513 | U. S., | Strangers, | 4 00 | 7 50 | Semi-monthly, | One, |

## MISCELLANEOUS—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No, | 9 | No, | No, | No. |
| No, | 10 | No, | No, | No. |
| | 9½ | No, | Two weeks, | Yes. |
| | 9½ | No, | Two weeks, | No. |
| Never received the same, | 6 | Yes, | Four weeks, | Yes. |
| Yes, | 5 | Yes, | Two weeks, | Yes. |
| | 8 | No, | Two weeks, | Yes. |
| | 9 | No, | Two weeks, | Yes. |
| | 11 | No, | Two weeks, | No. |
| No; about one-half, | 9 | No, | As long as you wish, | No. |
| No; at least $11 less, | 10 | No, | No, | No. |
| No; about one-half, | 9 | Yes, | Two weeks, | Yes. |
| | 8 | No, | No, | No. |
| No, | 9 | No, | Two weeks, | Yes. |
| | 9½ | No, | Two weeks, | Yes. |
| No, | 9 | No, | Two weeks, | No. |
| | 10 | No, | Two weeks, | No. |
| | 10 | No, | Two weeks, | No. |
| The same, | | Yes, | Two weeks, | Yes. |
| No; less than one-half, | 9½ | No, | No, | No. |
| Yes; the same, | 5 | Yes, | Two weeks, | Yes. |
| $4 less per week, | 10 | No, | Three weeks, | No. |
| | 10 | No, | Two weeks, | Yes. |
| | 8½ | No, | No, | |
| About one-half, | 10 | No, | Yes, | No. |
| From $2 to $9 less, | 9¾ | No, | Two weeks, | Yes. |
| About $4 less, | 10 | No, | Two weeks, | Yes. |
| | 9 | Yes, | Two weeks, | Yes. |
| | 14 | No, | No, | No. |
| | 9 | No, | No, | No. |

## SALESWOMEN—PHILADELPHIA.

| | | | | |
|---|---|---|---|---|
| | 5 | *Partly, | Two weeks, | Yes. |
| | 9¼ | *Partly, | Two weeks, | Yes. |
| | 10 | *Partly, | Two weeks, | Yes. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 514 | U. S., | Strangers, | $7 50 | $15 00 | Weekly, | One, |
| 515 | U. S., | Strangers, | 3 50 | 7 00 | Weekly, | Two, |
| 516 | U. S., | Parents, | | 5 00 | Semi-monthly, | Two, |
| 517 | U. S., | Brother, | 3 25 | 6 00 | Weekly, | Two, |
| 518 | U. S., | Sister, | 2 00 | 5 00 | Weekly, | One, |
| 519 | Ireland, | Strangers, | 4 50 | 8 00 | Semi-monthly, | Four, |
| 520 | U. S., | Parents, | 4 00 | 6 00 | Semi-monthly, | Three, |
| 521 | U. S., | Sister, | 3 00 | 5 50 | Semi-monthly, | Two, |
| 522 | U. S., | Parent, | | 7 00 | Semi-monthly, | Two, |
| 481 | U. S., | Parents, | | 6 00 | Semi-monthly, | One, |
| 482 | U. S., | Parents, | | 5 00 | Semi-monthly, | One, |
| 483 | U. S., | Parents, | | 8 00 | Weekly, | Three, |
| 484 | U. S., | Strangers, | 3 50 | 8 00 | Semi-monthly, | Two, |
| 485 | U. S., | Strangers, | 3 25 | 7 50 | Semi-monthly, | Three, |
| 486 | U. S., | Parents, | | 6 00 | Semi-monthly, | One, |
| 487 | U. S., | Parents, | 4 00 | 6 00 | Semi-monthly, | Three, |
| 488 | U. S., | Parents, | | 7 00 | Semi-monthly, | One, |
| 489 | U. S., | Parents, | | 8 00 | Weekly, | Five, |
| 490 | U. S., | Parents, | | 4 00 | Semi-monthly, | Three, |
| 491 | Ireland, | Husband, | | 10 00 | Semi-monthly, | One, |
| 492 | U. S., | Parents, | 4 50 | 7 00 | Semi-monthly, | Two, |
| 493 | U. S., | Parents, | 4 00 | 7 50 | Semi-monthly, | One, |
| 494 | U. S., | Parents, | 3 00 | 7 00 | Semi-monthly, | Two, |
| 495 | Ireland, | Strangers, | 3 25 | 7 00 | Semi-monthly, | One, |
| 496 | U. S., | Strangers, | 3 50 | 7 00 | Semi-monthly, | Two, |
| 497 | U. S., | Parents, | | 6 50 | Semi-monthly, | One, |
| 498 | U. S., | Parents, | 4 00 | 7 00 | Semi-monthly, | Two, |
| 499 | U. S., | Sister, | 3 00 | 6 50 | Weekly, | One, |
| 500 | U. S., | Parents, | | 3 50 | Semi-monthly, | Two, |
| 501 | U. S., | Parents, | 5 00 | 8 00 | Semi-monthly, | Two, |
| 502 | U. S., | Parents, | 3 50 | 7 00 | Semi-monthly, | One, |
| 503 | U. S., | House keeping, | | 11 00 | Semi-monthly, | |
| 504 | U. S., | Strangers, | 4 00 | 6 00 | Semi-monthly, | Two, |
| 505 | U. S., | House keeping, | | 12 00 | Weekly, | Six, |
| 506 | U. S., | Parent, | | 8 00 | Semi-monthly, | Two, |
| 507 | U. S., | Parent, | | 10 00 | Semi-monthly, | One, |

SALESWOMEN—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9½ | No, ..... | Two weeks,..... | Yes. |
| No; $5 less per week, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; about one-half, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| No; about one-half, ..... | 9 | Yes,. ..... | Two weeks,..... | Yes. |
| ..... | 10 | Yes, ..... | 3 or 4 weeks,..... | No. |
| From $4 to $8 less, ..... | 10 | *Partly, ..... | Two weeks..... | Yes. |
| From $12 to $15 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Nine days,..... | Yes. |
| No; about $3 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| About one-half, ..... | 10 | *Partly, ..... | Two weeks,..... | No. |
| ..... | 9 | Partly, ..... | Two weeks,..... | Yes. |
| No; less than one-half, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| About one-half, ..... | 9 | Yes,. ..... | Two weeks,..... | Yes. |
| Only one-half, ..... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two months,..... | No. |
| ..... | 5 | *Partly, ..... | Two weeks,..... | Yes. |
| Yes, ..... | 9 | No. ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| About the same, ..... | 9 | Yes, ..... | Two weeks,..... | No. |
| Several dollars less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 508 | U. S., ..... | Friends, ..... | ..... | $8 00 | Weekly,..... | One, .... |
| 509 | U. S., ..... | Parents, ..... | $3 00 | 7 00 | Semi-monthly, ..... | One, .... |
| 510 | U. S., ..... | Parents, ..... | ..... | 7 00 | Semi-monthly, ..... | One, .... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 451 | Ireland, ..... | Sister, ..... | $3 00 | $5 00 | Semi-monthly, ..... | Two, ... |
| 452 | U. S., ..... | Relatives, ..... | 4 00 | ..... | Semi-monthly, ..... | Three, .. |
| 453 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 454 | U. S., ..... | Friends, ..... | 3 00 | 6 50 | Semi-monthly, ..... | Four, ... |
| 455 | U. S., ..... | Strangers, ..... | 4 50 | 8 00 | Semi-monthly, ..... | Four, ... |
| 456 | U. S., ..... | Parents, ..... | ..... | 8 00 | Weekly,..... | One, .... |
| 457 | U. S., ..... | Parents, ..... | ..... | 2 50 | Weekly,..... | One, .... |
| 458 | Ireland, ..... | Strangers, ..... | 4 00 | 7 00 | Semi-monthly, ..... | One, .... |
| 459 | England, ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 460 | U. S., ..... | Parents, ..... | ..... | 8 50 | Semi-monthly, ..... | One, .... |
| 461 | U. S., ..... | Parents, ..... | ..... | 6 00 | Semi-monthly, ..... | Two, ... |
| 462 | Ireland, ..... | Sister, ..... | 4 00 | 6 00 | Weekly,..... | One, .... |
| 463 | U. S., ..... | Parent, ..... | 4 00 | 6 00 | Semi-monthly, ..... | One, .... |
| 464 | U. S., ..... | Parent, ..... | 3 50 | 7 00 | Semi-monthly, ..... | One, .... |
| 465 | Germany, ..... | Parent, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 466 | U. S., ..... | Parent, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 467 | U. S., ..... | Parent, ..... | ..... | 4 00 | Semi-monthly, ..... | Four, ... |
| 468 | U. S., ..... | Parent, ..... | 3 00 | 4 00 | Semi-monthly, ..... | One, .... |
| 469 | U. S., ..... | Parent, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 421 | Ireland, ..... | Keep house, ..... | ..... | $4 25 | Semi-monthly, ..... | Two, ... |
| 422 | Ireland, ..... | Sister, ..... | ..... | 3 50 | Semi-monthly, ..... | Two, ... |
| 423 | England, ..... | Parents, ..... | ..... | 4 00 | Semi-monthly, ..... | Three, .. |
| 424 | Scotland, ..... | Parents, ..... | ..... | 7 75 | Semi-monthly, ..... | One, .... |
| 425 | U. S., ..... | Parents, ..... | ..... | 7 00 | Weekly,..... | Two, ... |
| 426 | U. S., ..... | Relatives, ..... | $4 00 | 10 00 | Semi-monthly, ..... | ..... |
| 427 | U. S., ..... | Parents, ..... | ..... | 9 00 | Semi-monthly, ..... | One, .... |

* Piece work.

SALESWOMEN—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |

MISCELLANEOUS—PHILADELPHIA.

| | | | | |
|---|---|---|---|---|
| From $3 to $4 less, ..... | 9 | No, ..... | No, ..... | |
| ..... | 9 | No, ..... | Five weeks,..... | No. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| Two dollars less per week, ..... | 9 | No, ..... | Eight days,..... | Yes. |
| ..... | 10 | No, ..... | Four months,..... | No. |
| One-half less, ..... | 10½ | No, ..... | One month,..... | No. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 9½ | No, ..... | Ten days,..... | Yes. |
| ..... | 8½ | No, ..... | Two weeks,..... | No. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| ..... | 9 | *Partly, ..... | Two weeks,..... | No. |
| About one-half, ..... | 9¼ | No, ..... | No,..... | No. |
| ..... | 10 | No, ..... | Eight days,..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| From $2 up for same class, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |

MISCELLANEOUS—PHILADELPHIA.

| | | | | |
|---|---|---|---|---|
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | No,..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 8 & 9 | No, ..... | Two weeks,..... | No. |
| ..... | 10½ | No, ..... | ..... | ..... |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |

* Per week.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 428 | U. S., ..... | Parents, ..... | $5 00 | $8 00 | Semi-monthly, ..... | Two, ... |
| 429 | Norway, ..... | Strangers, ..... | 5 00 | 11 00 | Semi-monthly, ..... | Two, ... |
| 430 | U. S., ..... | Husband, ..... | ..... | 8 00 | Semi-monthly, ..... | One, .... |
| 431 | U. S., ..... | Parents, ..... | 3 50 | 6 00 | Semi-monthly, ..... | Two, ... |
| 432 | U. S., ..... | Parents, ..... | 2 50 | 6 00 | Semi-monthly, ..... | Two, ... |
| 433 | U. S., ..... | Parents, ..... | 3 00 | 8 00 | Semi-monthly, ..... | Two, ... |
| 434 | U. S., ..... | Parents, ..... | ..... | 16 00 | Semi-monthly, ..... | One, .... |
| 435 | U. S., ..... | Parents, ..... | 3 00 | 5 00 | Semi-monthly, ..... | Three, .. |
| 436 | U. S., ..... | Strangers, ..... | 4 00 | 10 00 | Semi-monthly, ..... | One, .... |
| 437 | Holland, ..... | Parent, ..... | 4 50 | 7 00 | Semi-monthly, ..... | Four, ... |
| 438 | Canada, ..... | Strangers, ..... | 3 50 | 7 00 | Weekly, ..... | Two, ... |
| 439 | U. S., ..... | Parents, ..... | ..... | 9 00 | Weekly, ..... | Two, ... |
| 440 | Ireland, ..... | Parents, ..... | ..... | 6 50 | Semi-monthly, ..... | One, .... |
| 441 | U. S., ..... | Parents, ..... | 3 00 | 6 00 | Semi-monthly, ..... | Two, ... |
| 442 | Germany, ..... | Relatives, ..... | ..... | 7 50 | Semi-monthly, ..... | One, .... |
| 443 | U. S., ..... | Relatives, ..... | 4 00 | 7 00 | Semi-monthly, ..... | Two, ... |
| 444 | U. S., ..... | Parent, ..... | 5 00 | 7 00 | Semi-monthly, ..... | Four, ... |
| 445 | U. S., ..... | Strangers, ..... | 3 50 | 6 00 | Weekly, ..... | One, .... |
| 446 | U. S., ..... | Parents, ..... | ..... | 10 00 | Semi-monthly, ..... | One, .... |
| 447 | Germany, ..... | Parents, ..... | ..... | ..... | Semi-monthly, ..... | Three, .. |
| 448 | Holland, ..... | Parents, ..... | 4 50 | 7 00 | Semi-monthly, ..... | Four, ... |
| 449 | Russia, ..... | Parents, ..... | ..... | 9 00 | Semi-monthly, ..... | One, .... |
| 450 | U. S., ..... | Relatives, ..... | 3 00 | 6 75 | Semi-monthly, ..... | Two, ... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 391 | U. S., ..... | Parents, ..... | $4 00 | $7 00 | Semi-monthly, ..... | One, .... |
| 392 | U. S., ..... | Parents, ..... | ..... | 4 00 | Semi-monthly, ..... | One, .... |
| 393 | U. S., ..... | Friends, ..... | 2 50 | 5 00 | Semi-monthly, ..... | One, .... |
| 394 | U. S., ..... | Parents, ..... | 3 00 | 7 00 | Semi-monthly, ..... | One, .... |
| 395 | U. S., ..... | Relative, ..... | 4 00 | 9 00 | Semi-monthly, ..... | One, .... |
| 396 | U. S., ..... | Strangers, ..... | 4 50 | 6 00 | Semi-monthly, ..... | One, .... |
| 397 | U. S., ..... | Strangers, ..... | 4 50 | 9 00 | Semi-monthly, ..... | One, .... |
| 398 | U. S., ..... | Parent, ..... | 3 50 | 7 00 | Semi-monthly, ..... | Three, .. |

* Piece work.

## MISCELLANEOUS—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less | How many hours are you employed each day? | Are you paid for time lost by sick ness? | Are you allowed an annual vacation, if so, for how long | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9 | *Partly, ..... | Four weeks,..... | No. |
| ..... | 9 | *Partly, ..... | Two weeks,..... | Partly. |
| ..... | 9 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 9 | *Partly, ..... | Two weeks,..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | No. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 8 | No, ..... | Two weeks,..... | No. |
| No; about one- half, ... ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 8 | *Partly, ..... | Two weeks,..... | No. |
| About one-half, ..... | 9 | No, ..... | Two weeks,..... | No. |
| ..... | 10 | No, ..... | ..... | ..... |
| ..... | 9 | *Partly, ..... | Two weeks,..... | No |
| ..... | 9 | *Partly, ..... | Two weeks,..... | No. |
| ..... | 8 & 9 | *Partly, ..... | Two weeks,..... | No. |
| ..... | 10 | No, ..... | Two weeks,..... | No |
| ..... | 9 | *Partly, ..... | Two weeks,..... | No. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| The same, ..... | 8 | No, ..... | Two weeks,..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | No. |
| ..... | 9 | *Partly, ..... | Two weeks,..... | No. |
| ..... | 9 | *Partly, ..... | Five weeks..... | No |

## BOOKKEEPERS—PHILADELPHIA.

| | | | | |
|---|---|---|---|---|
| About $6 less per week, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| About $9 less per week, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| The same as a man for same work. | 10 | No, ..... | Two weeks,..... | Yes. |
| About $8 per week less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| I feel sure I get less, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| One-third less for same work,.... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Less, ..... ..... | 10 | No, ..... | Two weeks,..... | Yes. |

* A beneficial society to which employes are compelled to belong.
* We are compelled to join a beneficial society and our dues and assessments are taken from our salary.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 399 | U. S., | Brother, | $4 50 | $6 00 | Semi-monthly, | Two, |
| 400 | U. S., | Strangers, | 4 00 | 7 35 | Semi-monthly, | One, |
| 401 | U. S., | Parents, | | 8 00 | Semi-monthly, | One, |
| 402 | U. S., | Parents, | | 9 50 | Semi-monthly, | Two, |
| 403 | U. S., | Strangers, | 4 00 | 9 00 | Semi-monthly, | Two, |
| 404 | U. S., | Parent, | | 6 50 | Semi-monthly, | Two, |
| 405 | Germany, | Parent, | | 9 00 | Semi-monthly, | One, |
| 406 | U. S., | Parent, | 3 00 | 6 00 | Semi-monthly, | One, |
| 407 | U. S., | Strangers, | 4 00 | 7 00 | Semi-monthly, | Two, |
| 408 | U. S., | Parents, | 3 00 | 6 00 | Semi-monthly, | Two, |
| 409 | U. S., | Parents, | | 4 00 | Semi-monthly, | One, |
| 410 | U. S., | Parents, | | 6 50 | Semi-monthly, | One, |
| 411 | U. S., | Parents, | | 6 00 | Semi-monthly, | Two, |
| 412 | U. S., | Parents, | | 4 00 | Semi-monthly, | One, |
| 413 | U. S., | Parents, | | 7 00 | Semi-monthly, | Two, |
| 414 | U. S., | House keeping, | | 14 00 | Semi-monthly, | Two, |
| 415 | U. S., | Parent, | 3 50 | 7 00 | Semi-monthly, | Three, |
| 416 | U. S., | Sister, | 6 00 | 20 00 | Semi-monthly, | Four, |
| 417 | U. S., | Parents, | | 9 00 | Semi-monthly, | One, |
| 418 | U. S., | Parents, | 3 00 | 11 00 | Semi-monthly, | One, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 361 | U. S., | Parents, | | $14 00 | Semi-monthly, | One, |
| 362 | U. S., | Parents, | | 10 00 | Semi-monthly, | One, |
| 363 | U. S., | Sister, | $3 00 | 7 00 | Semi-monthly, | Two, |
| 364 | Ireland, | Parents, | | 5 00 | Semi-monthly, | One, |
| 365 | U. S., | Strangers, | 3 00 | 6 00 | Semi-monthly, | Three, |
| 366 | U. S., | | 3 00 | 10 00 | Weekly, | One, |
| 367 | U. S., | Parent, | | 7 50 | Weekly, | Two, |
| 368 | U. S., | Parent, | | 10 00 | Semi-monthly, | Two, |
| 369 | U. S., | Parent, | | 9 00 | Semi-monthly, | One, |
| 370 | U. S., | Parent, | | 6 00 | Semi-monthly, | Three, |
| 371 | U. S., | Relatives, | 4 50 | 9 00 | Semi-monthly, | Two, |
| 372 | U. S., | Strangers, | 2 50 | 5 00 | Semi-monthly, | One, |
| 373 | U. S., | Parents, | 6 50 | 7 50 | Semi-monthly, | Two, |

BOOKKEEPERS--PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| About $4 per week less, ..... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| No; I get $8.50 less per week,.... | 8½ | *Partly, ..... | Two weeks,..... | Yes. |
| Less, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| Less, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| Five dollars less per week, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No; from $6 to $8 less per week,. | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| Less, ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| Less, ..... | 9¾ | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 9¾ | *Partly, ..... | Two weeks,..... | Yes. |
| No; not half as much as a man,. | 10 | Yes. ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| Less; $2 or $3, ..... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 8¼ | No, ..... | Two weeks,..... | Yes. |
| Less, ..... | 8¼ | *Partly, ..... | Two weeks,..... | Yes. |

STENOGRAPHERS AND BOOKKEEPERS—PHILADELPHIA.

| | | | | |
|---|---|---|---|---|
| About the same, ..... | 8 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| No; less, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 9 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 8 | No, ..... | Two weeks,..... | Yes. |
| I think less, ..... | 9 | No, ..... | Two weeks,..... | Sometimes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| I receive $2 less per week, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| About $8 less per week, ..... | 9 | *Partly, ..... | Two weeks,..... | Yes. |
| I think less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; $6 per week less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 374 | Ireland, | Parents, | | $4 50 | Semi-monthly, | Three, |
| 375 | U. S., | Parents, | $3 00 | 9 00 | Semi-monthly, | One, |
| 376 | U. S., | Strangers, | 3 00 | 6 00 | Semi-monthly, | One, |
| 377 | U. S., | Relatives, | 3 00 | 8 50 | Semi-monthly, | Three, |
| 378 | U. S., | Parents, | 7 00 | 12 00 | Semi-monthly, | Three, |
| 379 | U. S., | Strangers, | 4 50 | 7 00 | Semi-monthly, | Two, |
| 380 | U. S., | Parent, | | 6 00 | Semi-monthly, | One, |
| 381 | U. S., | Parent, | | 10 50 | Semi-monthly, | One, |
| 382 | U. S., | Parent, | | 7 00 | Semi-monthly, | One, |
| 383 | U. S., | Parent, | 3 00 | 5 00 | Semi-monthly, | One, |
| 384 | U. S., | Parent, | | 7 00 | Semi-monthly, | One, |
| 385 | U. S., | Parent, | | 7 00 | Semi-monthly, | One, |
| 386 | U. S., | Parent, | 5 00 | 10 00 | Semi-monthly, | One, |
| 387 | U. S., | Parent, | 2 00 | 6 00 | Semi-monthly, | Three, |
| 388 | U. S., | Strangers, | 3 50 | 10 00 | Semi-monthly, | Two, |
| 389 | U. S., | Strangers, | 4 50 | 12 00 | Semi-monthly, | Three, |
| 390 | U. S., | Parents, | | 9 00 | Semi-monthly, | Three, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 331 | U. S., | Parent, | $3 00 | $6 50 | Semi-monthly, | Two, |
| 332 | U. S., | Parent, | 3 50 | 4 50 | Semi-monthly, | One, |
| 333 | U. S., | Parent, | 4 00 | 5 00 | Semi-monthly, | One, |
| 334 | U. S., | Parent, | | 6 50 | Semi-monthly, | One, |
| 335 | U. S., | Parent, | | 4 50 | Semi-monthly, | Two, |
| 336 | U. S., | Parent, | | 5 00 | Semi-monthly, | One, |
| 337 | U. S., | Parent, | | 4 50 | Semi-monthly, | Two, |
| 338 | U. S., | Parent, | | 5 00 | Semi-monthly, | Two, |
| 339 | U. S., | Parent, | | 4 50 | Semi-monthly, | Two, |
| 340 | U. S., | Parent, | 2 00 | 4 00 | Semi-monthly, | One, |
| 341 | U. S., | Parent, | 4 00 | 4 50 | Semi-monthly, | One, |
| 342 | U. S., | Parent, | 3 00 | 6 00 | Semi-monthly, | One, |
| 343 | U. S., | Parent, | | 5 00 | Semi-monthly, | Two, |
| 344 | U. S., | Parent, | | 5 00 | Semi-monthly, | Three, |
| 345 | U. S., | Parent, | | 4 50 | Semi-monthly, | One, |
| 346 | U. S., | Parent, | 3 00 | 5 00 | Semi-monthly, | One, |

## STENOGRAPHERS AND BOOKKEEPERS--PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No; about one third less, .. .. | 10 | No, ..... | Two weeks,..... | Yes. |
| No; less, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No; at least $5 less per week... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| No; about $3.50 per week less,... | 9¾ | *Partly, ..... | Two weeks,..... | Yes. |
| No; about $3 per week less, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| Less, ..... ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| Less, ..... ..... | 9¾ | *Partly, . .. | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| About $4 less per week, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| Possibly $3 or $4 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Less, ..... ..... | 8½ | No, ..... | Two weeks,..... | Yes. |
| Less, ..... ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| About $2 less per week ,..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| Less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |

## INSPECTORS—PHILADELPHIA.

| | | | | |
|---|---|---|---|---|
| Yes, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Yes, ..... | 10 | Yes. ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| I think less. ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| I think less, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| Same, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| Less, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| About $2 or $3 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| I think about half as much as men, | 10 | No, ..... | Two weeks,..... | Yes. |
| I think about $1.50 per week less. | 10 | *Partly, ..... | Ten days,..... | Yes. |
| No; about $3 or $4 less, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| I think the same, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| About the same, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| Three dollars less per week, ..... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |

* A girl who compares the goods purchased with the tickets and puts them in packages.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 347 | U. S., ..... | Parents, ..... | $3 00 | $6 00 | Semi-monthly, ..... | One, .... |
| 348 | U. S., ..... | Parent, ..... | ..... | 4 00 | Weekly, ..... | Two, ... |
| 349 | England, ..... | Parent, ..... | ..... | 6 50 | Semi-monthly, ..... | One, .... |
| 350 | U. S., ..... | Parent, ..... | 2 50 | 5 00 | Semi-monthly, ..... | One, .... |
| 351 | U. S., ..... | Parent, ..... | 2 50 | 5 00 | Semi-monthly, ..... | Two, ... |
| 352 | U. S., ..... | Parent, ..... | 2 50 | 5 00 | Semi-monthly, ..... | One, .... |
| 353 | U. S., ..... | Parent, ..... | 2 50 | 5 00 | Semi-monthly, ..... | One, .... |
| 354 | U. S., ..... | Parent, ..... | ..... | 5 00 | Weekly, ..... | One, .... |
| 355 | U. S., ..... | W. C. A., ..... | 3 00 | 4 50 | Weekly, ..... | Three, .. |
| 301 | U. S., ..... | Parents, ..... | ..... | 4 50 | Semi-monthly, ..... | One, .... |
| 302 | U. S., ..... | Parents, ..... | 3 00 | 5 00 | Semi-monthly, ..... | Two, ... |
| 303 | U. S., ..... | Parents, ..... | ..... | 6 00 | Semi-monthly, ..... | One, .... |
| 304 | U. S., ..... | Parents, ..... | 3 00 | 7 00 | Semi-monthly, ..... | One, .... |
| 305 | U. S., ..... | Parents, ..... | ..... | 6 50 | Semi-monthly, ..... | Two, ... |
| 306 | U. S., ..... | Parents, ..... | ..... | 4 50 | Semi-monthly, ..... | One, .... |
| 307 | U. S., ..... | Strangers, ..... | 3 00 | 7 00 | Semi-monthly, ..... | Three, .. |
| 308 | U. S., ..... | Parents, ..... | ..... | 6 50 | Semi-monthly, ..... | Two, ... |
| 309 | U. S., ..... | Parents, ..... | 4 00 | 5 50 | Semi-monthly, ..... | Three, .. |
| 310 | U. S., ..... | Parents, ..... | ..... | 4 50 | Semi-monthly, ..... | One, .... |
| 311 | U. S., ..... | Parents, ..... | 4 00 | 5 50 | Semi-monthly, ..... | Two, ... |
| 312 | U. S., ..... | Parents, ..... | 3 00 | 4 50 | Semi-monthly, ..... | One, .... |
| 313 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | One, .... |
| 314 | U. S., ..... | Parents, ..... | ..... | 6 50 | Semi-monthly, ..... | Two, ... |
| 315 | U. S., ..... | Parents, ..... | ..... | 4 00 | Semi-monthly, ..... | One, .... |
| 316 | U. S., ..... | Guardian, ..... | 3 25 | 5 00 | Semi-monthly, ..... | One, .... |
| 317 | U. S., ..... | Strangers, ..... | 3 50 | 6 00 | Semi-monthly, ..... | Two, ... |
| 318 | U. S., ..... | Parents, ..... | 2 00 | 5 00 | Semi-monthly, ..... | One, .... |
| 319 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | Two, ... |
| 320 | U. S., ..... | Sister, ..... | 2 75 | 5 50 | Semi-monthly, ..... | One, .... |
| 321 | U. S., ..... | Parent, ..... | ..... | 7 00 | Semi-monthly, ..... | One, .... |
| 322 | U. S., ..... | Parent, ..... | ..... | 6 50 | Semi-monthly, ..... | One, .... |
| 323 | U. S., ..... | Parent, ..... | ..... | 7 00 | Semi-monthly, ..... | Two, ... |
| 324 | U. S., ..... | Parent, ..... | ..... | 4 50 | Semi-monthly, ..... | One, .... |
| 325 | U. S., ..... | Parent, ..... | 2 50 | 4 50 | Semi-monthly, ..... | One, .... |
| 326 | U. S., ..... | Parent, ..... | 3 00 | 7 00 | Semi-monthly, ..... | One, .... |
| 327 | U. S., ..... | Parent, ..... | 3 00 | 5 00 | Semi-monthly, ..... | One, .... |

INSPECTORS—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work. If less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| Two or three dollars less, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| About $2 less, ..... | 10 | Yes, ..... | Ten days,..... | Yes. |
| No, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| Two dollars less, ..... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| Two dollars less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| From $1.50 to $3 per week less,.... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| From $1.50 to $3 per week less,.... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10½ | No, ..... | No. | |
| About the same, ..... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| Two dollars less per week, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | ..... | Two weeks,..... | Yes. |
| Two dollars less per week, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| About $3 less per week, ..... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| Less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| About one-half for same work,... | 10 | No, ..... | Two weeks,..... | Yes. |
| About $3.50 to $4 less per week,... | 9¼ & 10¼ (S.) | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Three to $5 less per week, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| No; less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; less, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| Less, ..... | 9 | *Partly, ..... | Two weeks,..... | Yes. |
| $2 to $3 per week less, ..... | 9¼ | No, ..... | Ten days,..... | Yes. |
| $2 to $3 per week less, ..... | 9¼ | No, ..... | Twelve days,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |

* Beneficial society conducted by firm, to which employes are compelled to join.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 328 | U. S., ..... | Parent, ..... | $2 50 | $5 00 | Semi-monthly, ..... | One .... |
| 329 | U. S., ..... | Parent, ..... | 2 50 | 5 00 | Semi-monthly, ..... | One .... |
| 330 | U. S., ..... | Parent, ..... | 4 00 | 7 00 | Semi-monthly, ..... | Two, ... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 271 | U. S., ..... | Parents, ..... | ..... | $4 00 | Semi-monthly, ..... | Two, ... |
| 272 | U. S., ..... | Relatives, ..... | $5 00 | 7 00 | Semi-monthly, ..... | Four, ... |
| 273 | U. S., ..... | Relatives, ..... | 4 00 | 8 00 | Semi-monthly, ..... | Two, ... |
| 274 | England, ..... | Strangers, ..... | 3 25 | 7 50 | Semi-monthly, ..... | One, .... |
| 275 | U. S., ..... | Keep house, ..... | ..... | 15 00 | Semi-monthly, ..... | Four, ... |
| 276 | U. S., ..... | Parents, ..... | ..... | 6 00 | Semi-monthly, ..... | Two, ... |
| 277 | U. S., ..... | Parents, ..... | ..... | 8 00 | Semi-monthly, ..... | One, .... |
| 278 | U. S., ..... | Strangers, ..... | 3 25 | 8 00 | Semi-monthly, ..... | Three, .. |
| 279 | U. S., ..... | Parents, ..... | ..... | 10 00 | Semi-monthly, ..... | One, .... |
| 280 | U. S., ..... | Parents, ..... | 3 50 | 7 00 | Semi-monthly, ..... | One, .... |
| 281 | U. S., ..... | Parents, ..... | 3 50 | 5 00 | Semi-monthly, ..... | Two, ... |
| 282 | Ireland, ..... | Strangers, ..... | 4 50 | 12 00 | Semi-monthly, ..... | One, .... |
| 283 | U. S., ..... | Parents, ..... | 4 00 | 6 00 | Semi-monthly, ..... | Two, ... |
| 284 | U. S., ..... | Parents, ..... | ..... | 7 00 | Semi-monthly, ..... | One, .... |
| 285 | U. S., ..... | Strangers, ..... | 3 50 | 6 50 | Semi-monthly, ..... | One, .... |
| 286 | U. S., ..... | Parent, ..... | 3 50 | 5 50 | Semi-monthly, ..... | One, .... |
| 287 | U. S., ..... | Parent, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 288 | U. S., ..... | Parent, ..... | 4 00 | 7 00 | Semi-monthly, ..... | One, .... |
| 289 | U. S., ..... | Strangers, ..... | 5 25 | 7 50 | Semi-monthly, ..... | One, .... |
| 290 | U. S., ..... | House keeping, ..... | ..... | 11 00 | Semi-monthly, ..... | One, .... |
| 291 | U. S., ..... | Brother, ..... | 4 00 | 9 00 | Semi-monthly, ..... | Two, ... |
| 292 | U. S., ..... | Parent, ..... | 5 00 | 8 00 | Semi-monthly, ..... | Two, ... |
| 293 | U. S., ..... | Parent, ..... | 5 00 | 8 00 | Semi-monthly, ..... | One, ... |
| 294 | U. S., ..... | Strangers, ..... | 4 25 | 6 00 | Semi-monthly, ..... | One, ... |
| 295 | U. S., ..... | Sister, ..... | 3 00 | 8 00 | Semi-monthly, ..... | One, .... |
| 296 | U. S., ..... | Parents, ..... | 3 50 | 6 50 | Semi-monthly, ..... | One, .... |
| 297 | U. S., ..... | Parents, ..... | ..... | 4 50 | Semi-monthly, ..... | One, .... |
| 298 | U. S., ..... | Parents, ..... | 3 00 | 6 00 | Semi-monthly, ..... | One, .... |
| 299 | U. S., ..... | Parents, ..... | 6 00 | 9 00 | Semi-monthly, ..... | Two, ... |
| 300 | U. S., ..... | Parents, ..... | 5 00 | 8 50 | Semi-monthly, ..... | Two, ... |

INSPECTORS--PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| $2 less, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| $2 less, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| Yes; about the same, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |

SALESWOMEN—PHILADELPHIA.

| | | | | |
|---|---|---|---|---|
| ..... | 5¼ | *Partly, ..... | Ten days,..... | Yes. |
| No gentlemen in department,.... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| Less, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| No men in department, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| The same, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| No; $7 to 12 less p. w'k,same w'rk | 10 | No, ..... | Two weeks,..... | Yes. |
| More than some & less than others | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| About $3 or $4 less, ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; not over one-half, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No men in department, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| No men in department, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| Yes, ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| No; less, ..... | 9½ | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| No; about one-half, ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| I think about $3 less per week,.. | 10 | *Partly, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 1 | U. S., ..... | Parents, ..... | ..... | $9 00 | Semi-monthly, ..... | Two, .... |
| 2 | U. S., ..... | Parents, ..... | ..... | 3 75 | Weekly, ..... | One, .... |
| 3 | U. S., ..... | Strangers, ..... | $4 00 | 7 00 | Semi-monthly, ..... | Two, .... |
| 4 | U. S., ..... | Brothers and sisters | ..... | 4 00 | Semi-monthly, ..... | One, .... |
| 5 | U. S., ..... | Father and sisters, | 5 00 | 15 00 | Semi-monthly, ..... | Two, .... |
| 6 | U. S., ..... | Parent, ..... | ..... | 5 00 | Semi-monthly, ..... | Three, .. |
| 7 | U. S., ..... | Uncle, ..... | 3 00 | 7 00 | Semi-monthly, ..... | Two, .... |
| 8 | Ireland, ..... | Parent, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 9 | U. S., ..... | Strangers, ..... | 4 00 | 8 50 | Semi-monthly, ..... | One, .... |
| 10 | U. S., ..... | Parents ..... | 3 00 | 4 00 | Semi-monthly, ..... | Two, .. . |
| 11 | U. S., ..... | Strangers, ..... | 3 00 | 6 00 | Semi-monthly, ..... | Two, .... |
| 12 | U. S., ..... | Parent, ..... | ..... | 8 00 | Semi-monthly, ..... | One, .... |
| 13 | U. S., ..... | Parent, ..... | ..... | 8 00 | Semi-monthly, ..... | ..... |
| 14 | U. S., ..... | Parent, ..... | 3 00 | 5 50 | Semi-monthly, ..... | One, .... |
| 15 | U. S., ..... | Parent, ..... | 6 00 | 8 00 | Semi-monthly, ..... | One, .... |
| 16 | U. S., ..... | Parent, ..... | 2 50 | 6 00 | Semi-monthly, ..... | Two, .... |
| 17 | U. S., ..... | Strangers, ..... | 4 00 | 8 00 | Semi-monthly, ..... | Two, .... |
| 18 | U. S., ..... | Sisters, ..... | 3 00 | 7 00 | Semi-monthly, ..... | Two, .... |
| 19 | U. S., ..... | Aunt, ..... | 3 00 | 4 00 | Semi-monthly, ..... | One, .... |
| 20 | U. S., ..... | Strangers, ..... | 3 00 | 6 00 | Semi-monthly, ..... | Two, .... |
| 21 | U. S., ..... | Parents, ..... | 3 00 | 4 00 | Semi-monthly, ..... | One, .... |
| 22 | Ireland, ..... | Parents, ..... | ..... | 6 00 | Semi-monthly, ..... | Two, .... |
| 23 | U. S., ..... | W. C. A., ..... | ..... | 6 00 | Semi-monthly, ..... | One, .... |
| 24 | U. S., ..... | Parents, ..... | 3 50 | 6 00 | Semi-monthly, ..... | Two, .... |
| 25 | U. S., ..... | Parents, ..... | 4 00 | 7 00 | Semi-monthly, ..... | One, .... |
| 26 | U. S., ..... | Strangers, ..... | 5 00 | 14 00 | Semi-monthly, ..... | One, .... |
| 27 | U. S., ..... | Parent ,..... | 5 00 | 9 00 | Semi-monthly, ..... | Two, .... |
| 28 | U. S., ..... | Strangers, ..... | 3 00 | .... 5 00 | Semi-monthly, ..... | Two, .... |
| 29 | U. S., ..... | Strangers, ..... | 5 00 | 5 p. c. c. | Semi-monthly, ..... | One, .... |
| 30 | U. S., ..... | Strangers, ..... | 5 00 | 7 00 | Weekly, ..... | Two, .... |
| 31 | U. S., ..... | Parents, ..... | ..... | 6 00 | Weekly, ..... | Four, ... |
| 32 | U. S., ..... | Strangers, ..... | 5 00 | 12 00 | Semi-monthly, ..... | One, .... |
| 33 | U. S., ..... | Parent, ..... | ..... | 6 50 | Semi-monthly, ..... | One, .... |
| 34 | U. S., ..... | Parent, ..... | 3 00 | 6 00 | Semi-monthly, ..... | One, .... |
| 35 | U. S., ..... | Strangers, ..... | 3 50 | 7 50 | Weekly, ..... | Two, .... |
| 36 | U. S., ..... | Strangers, ..... | 7 50 | 12 00 | Weekly, ..... | Two, .... |

SALESWOMEN—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No; nothing like the same, ..... | ) and S. 12 | No, ..... | Two weeks,..... | No. |
| I think less, ..... | 9 | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 5 | *Yes, $2.50,.. | No. | |
| About the same, ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| No; $3 or $4 less per week, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No; about one-half less, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No; a boy gets $1 more than I, .. | 9 | *Partly, .... | One week,..... | Yes. |
| No; $2 dollars less, ..... | 10 | *Y.,af,1st w. | Two weeks,..... | Yes. |
| ..... .. | 9 | *Yes, ..... | Two weeks,..... | No. |
| No; $6 less per week, ..... | 10 | *Yes, ..... | Two weeks,..... | Yes. |
| ..... . | 10 | *Yes, ..... | Two weeks,..... | Yes. |
| $3 or $4 less per week, ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| I think about $8 less per week, .. | 10 | No, ..... | Two weeks,..... | Yes. |
| From $2 to $4 per week less, ..... | 10 | No, ..... | Ten days,..... | Yes. |
| From $4 to $7 per week less, ... | 10 | *Yes, ..... | Two weeks,..... | Yes. |
| No; about 50 per cent. less, ... | 9 | Yes, ..... | Two weeks,..... | Yes. |
| ..... ... | 5 | *Yes, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | *Yes, ..... | Ten days,..... | Yes. |
| ..... ..... | 5 | No, ..... | As long as desired, | No. |
| No; about one-third less, ..... | 10 | No. ..... | Two weeks,..... | Yes. |
| ..... | 10 | No. ..... | Two weeks,..... | Yes. |
| No; less from $1 up, ..... | 10 | No. ..... | Two weeks,..... | Yes. |
| No; $4 or $5 per week less, ..... | 10 | No. ..... | Two weeks,..... | Yes. |
| About the same, ..... | 10 | No. ..... | Two weeks,..... | Yes. |
| Less; do not know how much, .. | 10 | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| Just the same, ..... | 10 | *Partly, .... | Two weeks,..... | No. |
| No; about one-half, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; from $6 to $13 less, ..... | 9¼ | $5 per week, | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| No; men are paid twice as much. | 10 | *Partly, .... | Two weeks,..... | Yes. |
| From $4 to $5 less per week, ... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 37 | U. S., | Strangers, | $3 50 | $7 00 | Weekly, | Six, |
| 38 | U. S., | Strangers, | 3 00 | 6 00 | Weekly, | Two, |
| 39 | U. S., | Keep house, | | 10 00 | Weekly, | One, |
| 40 | U. S., | Keep house, | | 7 00 | Weekly, | Three, |
| 41 | U. S., | Keep house, | | 8 00 | Weekly, | Five, |
| 42 | U. S., | Parent, | | 7 00 | Weekly, | Three, |
| 43 | U. S., | Strangers, | 4 00 | 7 00 | Weekly, | Three, |
| 44 | U. S., | Parents, | 1 50 | 5 00 | Weekly, | Two, |
| 45 | U. S., | Grand parent, | 3 00 | 5 00 | Weekly, | Four, |
| 46 | U. S., | Parent, | | 7 00 | Weekly, | Six, |
| 47 | U. S., | Parent, | | | Weekly, | One, |
| 48 | U. S., | Parent, | | 7 00 | Semi-monthly, | Three, |
| 49 | U. S., | Aunt, | | 7 50 | Semi-monthly, | One, |
| 50 | U. S., | Parent, | 3 00 | 6 00 | Semi-monthly, | Three, |
| 51 | U. S., | Parent, | 5 00 | 5 50 | Semi-monthly, | Two, |
| 52 | U. S., | Parent, | 4 00 | 6 50 | Semi-monthly, | Two, |
| 53 | U. S., | Keep house, | | 11 00 | Semi-monthly, | Three, |
| 54 | U. S., | Parent, | 5 00 | 11 00 | Semi-monthly, | One, |
| 55 | U. S., | Parent, | | 5 00 | Semi-monthly, | Two, |
| 56 | U. S., | Parent, | 4 00 | 6 50 | Semi-monthly, | Two, |
| 57 | U. S., | Parent, | 2 00 | 6 00 | Semi-monthly, | One, |
| 58 | U. S., | Brother-in-law, | | 11 00 | Semi-monthly, | Two, |
| 59 | U. S., | Parent, | 3 00 | 7 50 | Semi-monthly, | Two, |
| 60 | U. S., | Parent, | 2 50 | 5 00 | Semi-monthly, | One, |
| 61 | U. S., | Parent, | | 5 00 | Semi-monthly, | One, |
| 62 | U. S., | Strangers, | 3 50 | 6 00 | Semi-monthly, | Two, |
| 63 | U. S., | Parents, | 3 00 | 7 00 | Semi-monthly, | Four, |
| 64 | U. S., | Parents, | | 6 50 | Semi-monthly, | One, |
| 65 | U. S., | Parents, | | 9 00 | Semi-monthly, | One, |
| 66 | U. S., | Parents, | 2 50 | 4 00 | Semi-monthly, | Two, |
| 67 | U. S., | Strangers, | 3 00 | 5 00 | Semi-monthly, | One, |
| 68 | Ireland, | Strangers, | 4 50 | 11 00 | Semi-monthly, | One, |
| 69 | U. S., | Sister, | 3 50 | 8 00 | Semi-monthly, | Four, |
| 70 | U. S., | Strangers, | 3 25 | 6 50 | Semi-monthly, | One, |

SALESWOMEN—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, If less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| I think a few dollars less, | 9 | No, | Two weeks, | Yes. |
| No, | 9¼ | No, | | No. |
| | 9 | No, | Two weeks, | Yes. |
| No; less, | 9¼ | No, | As long as you want | No. |
| | 9 and 10 | *Partly, | Two weeks, | Yes. |
| No; about $3 per week less, | 9 | No, | As long as you want | No. |
| | 8¾ | No, | Two weeks, | Yes. |
| | 9 | No, | Two weeks, | Yes. |
| No; about $5 less per week, | 9¼ | No, | Two weeks, | No. |
| No; about one-half as much, | 8¾ | No, | Two months, | No. |
| Less, | 10 | No, | Two weeks, | Yes. |
| | 10 | No, | Two weeks, | Yes. |
| | 10 | No, | Two weeks, | Yes. |
| Less, | 9 | No, | Two weeks, | No. |
| Less, | 9½ | No, | Ten days, | Yes. |
| | 10 | *Partly, | Two weeks, | Yes. |
| Men not empl'd to sell ladies' coats. | 10 | No, | Two weeks, | Yes. |
| | 10 | *Partly, | Two weeks, | Yes. |
| No; about one half, | 10 | No, | Two weeks, | Yes. |
| No; about one half, | 10 | No, | Two weeks, | Yes. |
| | 10 | No, | Two weeks, | Yes. |
| | 10 | No, | Two weeks, | Yes. |
| No; $2 to $2.50 less per week, | 10 | *Partly, | Two weeks, | Yes. |
| | 9 | No, | Two weeks, | Yes. |
| | 9¼ | Yes, | Two weeks, | Yes. |
| No; about $7 less per week, | 9¼ | *Partly, | Ten days, | Yes. |
| No; $5 to $13 less for same work, | 9¼ | *Partly, | Two weeks, | Yes. |
| | 9 | Yes, | Two weeks, | Yes. |
| | 9 | Partly, | Two weeks, | Yes. |
| | 5 | No, | Two weeks, | Yes. |
| | 10 | *Partly, | Two weeks, | Yes. |
| | 10 | *Partly, | Two weeks | Yes. |
| | 10 | No, | Two weeks | Yes. |
| No; about one-half, | 10 | No, | Ten days, | Yes. |

* By joining a beneficial society.
** Paid for one week's vacation after one year's service. Paid for two week's vacation after two year's service.
‖ By belonging to a beneficial society connected with the business.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 71 | U. S., ..... | Parents, ..... | $3 00 | $6 50 | Semi-monthly, ..... | Two, .... |
| 72 | U. S., ..... | Parents, ..... | ..... | 7 00 | Semi-monthly, ..... | One, .... |
| 73 | Belgium, ..... | Strangers, ..... | 3 00 | 6 00 | Semi-monthly, ..... | One, .. . |
| 74 | Ireland, ..... | Keep house, ..... | ..... | 18 00 | Semi-monthly, ..... | Three, .. |
| 75 | U. S., ..... | Parent, ..... | ..... | 6 00 | Semi-monthly, ..... | One, ... |
| 76 | U. S., ..... | Strangers, ..... | 3 00 | 7 00 | Semi monthly, ..... | One, .... |
| 77 | U. S., ..... | Parent, ..... | 5 00 | 8 00 | Semi-monthly, ..... | ..... |
| 78 | U. S., ..... | Strangers, ..... | 4 00 | 6 00 | Semi monthly, ..... | One, .... |
| 79 | U. S., ..... | Parents, ..... | 5 00 | 8 00 | Semi-monthly, ..... | Three, .. |
| 80 | U. S., ..... | Brother, ..... | 3 50 | 7 00 | Semi-monthly, ..... | Three, .. |
| 81 | U. S., ..... | Parent, ..... | 4 00 | 4 50 | Semi-monthly, .... | One, ..... |
| 82 | Canada, ..... | Parent, ..... | 3 00 | 5 00 | Semi monthly ..... | One, .... |
| 83 | U. S., ..... | Parent, ..... | 3 50 | 6 50 | Semi-monthly, ..... | Three, .. |
| 84 | U. S., ..... | Parent, ..... | ..... | 5 00 | Semi-monthly, ..... | One, .... |
| 85 | U. S., ..... | Parent, ..... | 2 00 | 8 00 | Semi-monthly, ..... | One, .... |
| 86 | U. S., ..... | Parent, ..... | 3 00 | 6 00 | Semi-monthly, ..... | Two, .... |
| 87 | U. S., ..... | Aunt, ..... | 3 00 | 6 00 | Semi-monthly, ..... | Two, .... |
| 88 | U. S., ..... | Parent, ..... | 3 00 | 7 00 | Semi-monthly, ..... | Two, .... |
| 89 | U. S., ..... | Parent, ..... | 4 00 | 8 00 | Semi-monthly, ..... | Three, .. |
| 90 | U. S., ..... | Aunt, ..... | ..... | 7 00 | Semi-monthly, ..... | Two, .... |
| 91 | U. S., ..... | Strangers, ..... | 3 00 | 5 00 | Semi-monthly, ..... | Two, .... |
| 92 | U. S., ..... | Parents, ..... | 3 00 | 5 00 | Weekly, ..... | One, .... |
| 93 | U. S., ..... | Parents, ..... | 4 50 | 8 00 | Semi-monthly, ..... | One, .... |
| 94 | U. S., ..... | Strangers, ..... | 4 00 | 6 00 | Semi-monthly, ..... | Four, ... |
| 95 | U. S., ..... | Keep house, ..... | ..... | 9 00 | Semi-monthly, ..... | One, .... |
| 96 | England, ..... | Parent, ..... | 3 00 | 5 50 | Semi-monthly, ..... | Two, .... |
| 97 | U. S., ..... | Parent, ..... | 4 00 | 7 00 | Semi-monthly, ..... | One, .... |
| 98 | U. S., ..... | Parent, ..... | 5 00 | 7 00 | Semi-monthly, ..... | Two, .... |
| 99 | U. S., ..... | Parent, ..... | 3 50 | 6 50 | Semi-monthly, ..... | One, .... |
| 100 | U. S., ..... | Parent, ..... | 3 00 | 7 00 | Semi-monthly, ..... | Two, .... |
| 101 | U. S., ..... | Parent, ..... | ..... | 7 00 | Semi-monthly, ..... | One, .... |
| 102 | U. S., ..... | Parent, ..... | ..... | 9 00 | Semi-monthly, ..... | One, .... |
| 103 | U. S., ..... | Strangers, ..... | 3 00 | 7 00 | Semi-monthly, ..... | Two, .... |
| 104 | U. S., ..... | Strangers, ..... | 4 00 | 8 00 | Semi-monthly, ..... | Three, .. |
| 105 | U. S., ..... | Strangers, ..... | 5 00 | 11 00 | Semi-monthly, ..... | One, .... |
| 106 | U. S., ..... | Parents, ..... | ..... | 6 50 | Semi-monthly, ..... | One, .... |

SALESWOMEN—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9 | *Partly, .... | Two weeks,..... | Yes. |
| No; $3 to $5 less per week, ..... | 10 | *Partly .... | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, ... | Two weeks,..... | Yes. |
| Full as much, ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| Less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| Less, ..... | 8¼ | No, ..... | Two weeks,..... | Yes. |
| No; one-half less, ..... | 10 | ..... | Two weeks,..... | Yes. |
| No; $1 less for same work, ..... | 10 | *Partly ... | Two weeks,..... | Yes. |
| ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 9 | *Partly, .... | Eight days,..... | Yes. |
| ..... | 9 | *Partly, .... | Eight days,..... | Yes. |
| Less, ..... | 10 | *Partly, ... | Two weeks,..... | Yes. |
| I think less, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| No; from $2 to $4 less per week,.. | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| No; $6 less per week, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, ... | Two weeks,..... | Yes. |
| No; $3 to $5 less per week, ..... | 10 | *Partly, ... | Two weeks,..... | Yes. |
| ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| Less, ..... | 10 | *Partly. ... | Two weeks,..... | Yes. |
| ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| No men in our department, ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| No; from $4 to $10 less per week,. | 9¼ | No, ..... | Two weeks,..... | Yes. |
| Less, ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| The same, ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| No men in our department, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| No; from $3 to $5 less per week,.. | 10 | No, ..... | Two weeks,..... | Yes. |
| No; at least $3.50 less per week,.. | 10 | *Partly, ... | Two weeks,..... | Yes. |
| No; $3 less per week, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No men in our department, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| 90 per cent. less, ..... | 10 | *Partly. .... | Two weeks,..... | Yes. |
| No; about $6 per week less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |

* We support a beneficial society and are paid from that.

? A.*

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 107 | U. S., ..... | Strangers, ..... | $3 50 | $7 00 | Semi-monthly, ..... | One, .... |
| 108 | U. S., ..... | Parent, ..... | ..... | 9 00 | Semi-monthly, ..... | One, .... |
| 109 | U. S., ..... | Guardian, ..... | ..... | 7 00 | Semi-monthly, ..... | One, .... |
| 110 | U. S., ..... | Sister, ..... | 3 00 | 6 00 | Semi-monthly, ..... | One, .... |
| 111 | U. S., ..... | Parent, ..... | ..... | 10 00 | Semi-monthly, ..... | Three, .. |
| 112 | U. S., ..... | Parent, ..... | ..... | 8 00 | Semi-monthly, ..... | Three, .. |
| 113 | U. S., ..... | Parent, ..... | ..... | 9 00 | Semi-monthly, ..... | Two, .... |
| 114 | U. S., ..... | Strangers, ..... | 5 50 | 7 50 | Semi-monthly, ..... | One, .... |
| 115 | U. S., ..... | Parents, ..... | 3 00 | 8 00 | Semi-monthly, ..... | Two, .... |
| 116 | Ireland, ..... | Relatives, ..... | 3 50 | 7 00 | Semi-monthly, ..... | One, .... |
| 117 | U. S., ..... | Strangers, ..... | 4 50 | 8 00 | Semi-weekly, ..... | Two, .... |
| 118 | U. S., ..... | Strangers, ..... | 4 50 | 9 00 | Weekly, ..... | Two, .. |
| 119 | U. S., ..... | Strangers, ..... | 4 50 | 6 50 | Semi-monthly, ..... | One, .... |
| 120 | U. S., ..... | Strangers, ..... | 5 00 | 8 00 | Semi-monthly, ..... | Two, .... |
| 121 | U. S., ..... | Parents, ..... | ..... | 9 00 | Semi-monthly, ..... | One, .... |
| 122 | U. S., ..... | Parents, ..... | ..... | 6 00 | Semi-monthly, ..... | Three, .. |
| 123 | U. S., ..... | Grand parents, .... | 3 00 | 7 00 | Semi-monthly, ..... | One, .... |
| 124 | U. S., ..... | Parents, ..... | ..... | 6 00 | Semi-monthly, ..... | Two, .... |
| 125 | U. S., ..... | Parents, ..... | ..... | 6 00 | Semi-monthly, ..... | Two, .... |
| 126 | U. S., ..... | Parents, ..... | 4 00 | 7 00 | Semi-monthly, ..... | One, .... |
| 127 | U. S., ..... | Strangers, ..... | 3 00 | 7 00 | Semi-monthly, ..... | One, .... |
| 128 | Germany, ..... | Keep house, ..... | ..... | 10 00 | Semi-monthly, ..... | Two. .... |
| 129 | U. S., ..... | Parents, ..... | ..... | 7 00 | Semi-monthly, ..... | One, .... |
| 130 | U. S., ..... | Parents, ..... | ..... | 7 00 | Semi-monthly, ..... | Two, .... |
| 131 | U. S., ..... | Sister, ..... | 4 00 | 8 50 | Semi-monthly, ..... | Three, .. |
| 132 | U. S., ..... | Parents, ..... | 4 00 | 6 00 | Semi-monthly, ..... | One, .... |
| 133 | U. S., ..... | Parents, ..... | 3 00 | 6 00 | Semi-monthly, ..... | One, .... |
| 134 | U. S., ..... | Parents, ..... | ..... | 10 00 | Semi-monthly, ..... | Two, .. . |
| 135 | U .S., ..... | Parents, ..... | 5 00 | 7 00 | Semi-monthly, ..... | One, .... |
| 136 | U. S., ..... | Parents, ..... | ..... | 5 00 | Weekly, ..... | Two, .... |
| 137 | U. S., ..... | Parents, ..... | 3 00 | 5 00 | Semi-monthly, ..... | Two. ... |
| 138 | U. S., ..... | Parents, ..... | 5 00 | 11 00 | Semi-monthly, ..... | Two, .... |
| 139 | U. S., ..... | Parents, ..... | 3 50 | 8 00 | Semi-monthly, ..... | Two. .... |
| 140 | U. S., ..... | Parents, ..... ... | ..... | 7 00 | Semi-monthly, ..... | Five, ... |
| 141 | U. S., ..... | Relatives, ..... | 5 00 | 8 50 | Semi-monthly, ..... | One, .... |
| 142 | U. S., ..... | Parent, ..... | 3 00 | 6 00 | Semi-monthly, ..... | One, .... |

SALESWOMEN—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| I think less, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| No men in our department, ..... | 9¼ | No, ..... | Two weeks,..... | Yes |
| No; from $2 to $4 less per week,.. | 10 | *Partly. .... | Ten days,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly ... | Two weeks,..... | Yes. |
| No men in our department, ..... | 10 | *Partly, .... | Ten days,..... | Yes. |
| . ..... | 9½ | *Partly, .... | Two weeks,..... | Yes. |
| ie, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ; from $4 to $6 less per week,.. | 10 | No, ..... | Two weeks,..... | Yes. |
| No; from $4 to $6 less per week,.. | 10 | No, ..... | Ten weeks,..... | P'd 2 weeks. |
| No men in our department, ..... | 10 | No, ..... | Ten days,..... | Yes. |
| I think men receive $2 per wk. more. | 10 | No, ..... | Two weeks,..... | Yes. |
| About the same, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| No; from $4 to $6 per week less,.. | 9¼ | No, ..... | Two weeks,..... | Yes. |
| No men empl'd in our department, | 9 | No, ..... | Two weeks,..... | Yes. |
| No; $1 per week less, ..... | 9½ | No, ..... | Two weeks,..... | Yes. |
| No; about $4 or $5 less per week,. | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly ... | Two weeks,..... | Yes. |
| ..... | 8 and 9 | *Partly, .... | 4 to 6 weeks,..... | ..... |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Less, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| No, ..... | 8 | Yes, ..... | Two weeks,..... | Yes. |
| No; at least $6 less per week, .... | 10 | *Partly, .. . | Two weeks,..... | No. |
| ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| I think less, ..... | 10 and 13 | No, ..... | Two weeks,..... | No. |
| Less, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| No men at our counter, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | *Partly, ... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| ..... . | 10 | *Partly, . .. | Two weeks,..... | Yes. |

* Paid from a beneficial society that we are compelled to patronize.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 143 | U. S., ..... | Stranger, ..... | $4 00 | $8 00 | Semi-monthly, ..... | Two, ... |
| 144 | U. S., ..... | Stranger, ..... | 4 00 | 8 50 | Semi-monthly, ..... | Two, .... |
| 145 | U. S., ..... | Relatives, ..... | 3 50 | 6 00 | Semi-monthly, ..... | One, .... |
| 146 | U. S., ..... | Strangers, ..... | 4 00 | 9 00 | Semi-monthly, ..... | Three, .. |
| 147 | U. S., ..... | Parents, ..... | 4 00 | 10 00 | Semi-monthly, ..... | Two, .... |
| 148 | Ireland, ..... | Brother, ..... | 5 00 | 16 50 | Semi-monthly, ..... | Two, ... |
| 149 | Ireland, ..... | Strangers, ..... | 4 50 | 10 00 | Semi-monthly, ..... | Four, ... |
| 150 | U. S., ..... | Parent, ..... | 4 00 | 6 00 | Semi-monthly, ..... | Two, .... |
| 151 | U. S., ..... | Strangers, ..... | 3 50 | 7 00 | Semi-monthly, ..... | One, .... |
| 152 | U. S., ..... | Parents, ..... | 3 00 | 8 00 | Semi-monthly, ..... | Four, ... |
| 153 | U. S., ..... | Strangers, ..... | 3 50 | 7 00 | Semi-monthly, ..... | Four, ... |
| 154 | Ireland, ..... | Strangers, ..... | 4 50 | 12 00 | Semi-monthly, ..... | Six, ..... |
| 155 | U. S., ..... | Parents, ..... | 4 50 | 8 00 | Semi-monthly, ..... | Two, ... |
| 156 | U. S., ..... | Parents, ..... | 4 00 | 7 00 | Semi-monthly, ..... | Three, .. |
| 157 | U. S., ..... | Parents, ..... | ..... | 6 00 | Semi-monthly, ..... | One, .... |
| 158 | U. S., ..... | Parents, ..... | ..... | 7 50 | Semi-monthly, ..... | One, .... |
| 159 | U. S., ..... | Strangers, ..... | 4 00 | 8 50 | Weekly, ..... | Two, ... |
| 160 | U. S., ..... | Parent, ..... | 7 00 | 16 00 | Semi-monthly, ..... | One, .... |
| 161 | U. S., ..... | Brother, ..... | 4 00 | 9 00 | Semi-monthly, ..... | One, .... |
| 162 | U. S., ..... | Keep house, ..... | ..... | 7 50 | Semi-monthly, ..... | One, ... |
| 163 | England, ..... | Strangers, ..... | 3 50 | 6 50 | Semi-monthly, ..... | Three, .. |
| 164 | U. S., ..... | Parents, ..... | ..... | 7 50 | Semi-monthly, ..... | One, .... |
| 165 | U. S., ..... | Keep house, ..... | ..... | 8 00 | Semi-monthly, ..... | Two, .... |
| 166 | U. S., ..... | Keep house, ..... | ..... | 7 00 | Semi-monthly, ..... | Three, .. |
| 167 | U. S., ..... | Parent, ..... | ..... | 8 50 | Semi-monthly, ..... | Two, .... |
| 168 | U. S., ..... | Parent, ..... | 3 00 | 5 50 | Semi-monthly, ..... | One, ... |
| 169 | U. S., ..... | Parent, ..... | 4 00 | 6 00 | Semi-monthly, ..... | Four, ... |
| 170 | U. S., ..... | Parents, ..... | ..... | 7 00 | Semi-monthly, ..... | One, .... |
| 171 | Ireland, ..... | Friends, ..... | 3 00 | 6 00 | Semi-monthly, ..... | Two, .... |
| 172 | U. S., ..... | Parents, ..... | ..... | 6 50 | Semi-monthly, ..... | Two, .... |
| 173 | U. S., ..... | Strangers, ..... | 3 25 | 9 00 | Semi-monthly, ..... | Two, .... |
| 174 | U. S., ..... | Parents, ..... | 4 00 | 7 00 | Semi-monthly, ..... | One, .... |
| 175 | U. S., ..... | Parents, ..... | 5 00 | 6 00 | Semi-monthly, ..... | Two, .... |
| 176 | U. S., ..... | Parents, ..... | 3 50 | 6 50 | Semi-monthly, ..... | One, .... |
| 177 | Scotland, ..... | Parents, ..... | 3 00 | 6 50 | Semi-monthly, ..... | Two, .... |
| 178 | U. S., ..... | Strangers, ..... | 3 25 | 8 00 | Semi-monthly, ..... | One, ... |

SALESWOMEN—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| From $4 to $8 less per week, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| Less, ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| Less than one-half the amount,.. | 10 | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 8 | No, ..... | Two weeks,..... | Yes. |
| Yes; paid the same, 5 per ct. com. | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No men in our department, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| I think from $3 to $4 less per week | 10 | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; from $4 to $6 less per week,.. | 9¾ | *Partly, .... | Two weeks,..... | Yes. |
| No; $7 or $8 less per week, ..... | 9 | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| Less for same class of work, ... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; about one-third less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| About the same, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; men get enough to sup't family | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| The same, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, .. | Two weeks,..... | Yes. |
| No; not over half, ..... | 8 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No men in our department, ..... | 10 | *Partly, ... | Two weeks,..... | Yes. |
| No men in our department, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| No; from $6 to $11 less per week,. | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Paid the same in our department, | 10 | *Partly, .... | 2 to 4 weeks,..... | ..... |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |

* The firm have a compulsory beneficial society that pays sick benefits.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 179 | U. S., | Parents, | $4 00 | $6 50 | Semi-monthly, | One, |
| 180 | U. S., | Sister, | 4 50 | 8 50 | Semi-monthly, | Three, |
| 181 | U. S., | Strangers, | 5 50 | 10 00 | Semi-monthly, | Two, |
| 182 | U. S., | Parent, | | 5 00 | Semi-monthly, | Three, |
| 183 | U. S., | Parent, | 3 50 | 7 00 | Semi-monthly, | One, |
| 184 | U. S., | Strangers, | 4 00 | 8 00 | Semi-monthly, | One, |
| 185 | Ireland, | Keep house, | | 8 00 | Semi-monthly, | Two, |
| 186 | U. S., | Relatives, | 4 00 | 6 50 | Semi-monthly, | One, |
| 187 | U. S., | Parents, | | 5 50 | Semi-monthly, | Four, |
| 188 | England, | Parents, | | 5 00 | Semi-monthly, | Two, |
| 189 | U. S., | Parents, | 3 00 | 6 50 | Semi-monthly, | One, |
| 190 | U. S., | Sister, | 3 00 | 6 00 | Semi-monthly, | One, |
| 191 | U. S., | Parents, | | 6 00 | Semi-monthly | Two, |
| 192 | U. S., | Parents, | | 10 00 | Semi-monthly, | One, |
| 193 | U. S., | Parents, | 2 00 | 6 00 | Semi-monthly, | Three, |
| 194 | U. S., | Parents, | 3 50 | 7 00 | Semi-monthly, | One, |
| 195 | U. S., | Parents, | 4 50 | 6 00 | Semi-monthly, | One, |
| 196 | U. S., | Grandparents, | 3 00 | 8 00 | Semi-monthly, | One, |
| 197 | U. S., | Parents, | 5 00 | 7 00 | Semi-monthly, | Three, |
| 198 | U. S., | Relatives, | | 7 50 | Semi-monthly, | Two, |
| 199 | U. S., | Strangers, | 4 00 | 9 00 | Semi-monthly, | Three, |
| 200 | U. S., | Grandparents, | 3 50 | 7 00 | Semi-monthly, | One, |
| 201 | U. S., | Parent, | | 11 00 | Semi-monthly | Two, |
| 202 | U. S., | Parent, | 3 50 | 7 50 | Semi-monthly, | One, |
| 203 | U. S., | Parent, | 4 50 | 7 00 | Semi-monthly, | One, |
| 204 | U. S., | Parent, | 3 00 | 7 00 | Semi-monthly, | Two, |
| 205 | U. S., | Strangers, | 5 00 | 10 00 | Semi-monthly | Two, |
| 206 | U. S., | Parent, | 3 00 | 6 00 | Semi-monthly | Two, |
| 207 | U. S., | Parent, | 5 00 | 6 50 | Semi-monthly, | One, |
| 208 | U. S., | Parent, | 5 00 | 7 00 | Semi-monthly | Two, |
| 209 | U. S., | Parent, | | 3 00 | Semi-monthly | Two, |
| 210 | U. S., | Parent, | 4 00 | 6 00 | Semi-monthly, | One, |
| 211 | U. S., | Parents, | 3 00 | 7 00 | Semi-monthly, | One, |
| 212 | U. S., | Parents, | | 6 00 | Semi-monthly, | Three, |
| 213 | U. S., | Parents, | 3 00 | 5 00 | Semi-monthly, | Three, |
| 214 | U. S., | Parents, | | 8 00 | Semi-monthly, | Two, |

SALESWOMEN—PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No men in our department, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| No men in our department, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 9 | *Partly, .... | Two weeks,..... | Yes. |
| No, ..... | 9½ | No, ..... | Two weeks,..... | Yes. |
| Less, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Six weeks,..... | No. |
| ..... | 9¾ | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; about one-half, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| No men in my department, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Yes, ..... | 9 and 9½ | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| No men in my department, ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| No; $6 to $8 less per week, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | No, ..... | Two weeks,..... | Yes, |
| Less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No men in my department, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| No men in my department, ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| No men in my department, ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| No; about one-half as much, .... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; $3 to $5 less, ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No men in my department, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| No; about one-half as much, .... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| No men in my department, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | *Partly, .... | Two weeks,..... | Yes. |
| Less than one-half, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| No; only about one-half, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| No men in my department, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| No; only about one-half, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |

* The firm have a compulsory beneficial society that pays sick benefits.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 215 | U. S., | Parents, | $2 00 | $9 00 | Semi-monthly, | One, |
| 216 | U. S., | Parents, | 4 00 | 8 50 | Semi-monthly, | Two, |
| 217 | U. S., | Sister, | | 11 00 | Semi-monthly, | One, |
| 218 | Belgium, | Parents, | | 9 50 | Semi-monthly, | One, |
| 219 | U. S., | Parents, | 5 00 | 8 00 | Semi-monthly, | One, |
| 220 | U. S., | Keep house, | | 6 00 | Semi-monthly, | Two, |
| 221 | U. S., | Parent | | 8 00 | Semi-monthly, | Two, |
| 222 | U. S., | Parent, | | 7 00 | Semi-monthly, | One, |
| 223 | U. S., | Relatives, | 3 50 | 8 00 | Semi-monthly, | One, |
| 224 | U. S., | Parents, | | 4 00 | Semi-monthly, | Two, |
| 225 | U. S., | Parents, | 3 25 | 6 50 | Semi-monthly, | One, |
| 226 | U. S., | Parents, | 3 00 | 7 00 | Semi-monthly, | One, |
| 227 | U. S., | Parents, | 3 00 | 7 00 | Semi-monthly, | Two, |
| 228 | U. S., | Strangers, | 3 00 | 6 00 | Semi-monthly, | One, |
| 229 | U. S., | Parents, | | 4 00 | Semi-monthly, | One, |
| 230 | U. S., | Parents, | 4 50 | 7 00 | Semi-monthly, | One, |
| 231 | U. S., | Relatives, | 3 50 | 6 00 | Semi-monthly, | Four, |
| 232 | U. S., | Parents, | 4 50 | 7 00 | Semi-monthly, | Two, |
| 233 | U. S., | Parents, | 4 50 | 7 00 | Semi-monthly, | Two, |
| 234 | U. S., | Parents, | 4 00 | 7 00 | Semi-monthly, | Two, |
| 235 | U. S., | Strangers, | 3 25 | 7 50 | Semi-monthly, | Three, |
| 236 | U. S., | Strangers, | 4 00 | 8 00 | Semi-monthly, | Two, |
| 237 | U. S., | Parents, | 4 00 | 7 00 | Semi-monthly, | One, |
| 238 | U. S., | Keep house, | | 9 50 | Semi-monthly, | Several, |
| 239 | U. S., | Parent, | | 3 50 | Semi-monthly, | One, |
| 240 | U. S., | Parent, | | 10 00 | Semi-monthly, | |
| 241 | U. S., | Parent, | | 7 50 | Semi-monthly, | One, |
| 242 | U. S., | Strangers, | 3 50 | 5 00 | Semi-monthly, | One, |
| 243 | U. S., | Parents, | 4 00 | 5 00 | Semi-monthly, | Two, |
| 244 | U. S., | Parents, | | 7 50 | Semi-monthly, | Two, |
| 245 | U. S., | Parents, | 3 00 | 7 00 | Semi-monthly, | One, |
| 246 | U. S., | Parents, | | 6 50 | Semi-monthly, | One, |
| 247 | U. S., | Grandparent, | 3 00 | 7 00 | Semi-monthly, | Two, |
| 248 | U. S., | Parent, | 3 50 | 7 50 | Semi-monthly, | Three, |
| 249 | U. S., | Parent, | 4 50 | 12 00 | Semi-monthly, | One, |
| 250 | U. S., | Relatives, | 3 50 | 8 00 | Semi-monthly, | One, |

SALESWOMEN--PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Yes, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Yes, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Yes, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| Less, ..... | 10 | *Partly, ... | Two weeks,..... | Yes. |
| No men in my department, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Less, ..... | 10 | *Partly, ... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 5 | No, ..... | Two weeks,..... | Yes. |
| No; fom $5 to $6 less,..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| No; about $3 or $4 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; less, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| No; less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; $1 to $2 less than stock boys, | 10 | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| No; less, ..... | 10 | ..... | ..... | ..... |
| About $5 less per week, ..... | 10 | No, ..... | Ten days,..... | Yes. |
| About $5 less per week, ..... | 10 | No, ..... | Ten days,..... | Yes. |
| No men in my department, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No, ..... | 9½ | No, ..... | Two weeks,..... | No. |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Eight days,..... | Yes. |
| Less, ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes, |
| Less, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Ten days,..... | Yes. |
| Less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No men in our department, ..... | 10 | No, ..... | Two weeks,..... | Yes, |
| Less, ..... | 9¾ | No, ..... | Two weeks,..... | Yes. |

* A beneficial society which all employes are compelled to join while in the store.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 251 | U. S., | Friends, | $3 00 | $6 00 | Semi-monthly, | Two, |
| 252 | U. S., | Parents, | | 4 50 | Semi-monthly, | Two, |
| 253 | U. S., | Strangers, | 4 50 | 11 00 | Semi-monthly, | Three, |
| 254 | U. S., | Keep house, | | 8 50 | Semi-monthly, | One, |
| 255 | U. S., | Strangers, | 3 25 | 8 00 | Semi-monthly, | One, |
| 256 | U. S., | Sister, | 2 50 | 9 00 | Semi-monthly, | Three, |
| 257 | U. S., | Aunt, | 3 00 | 6 00 | Semi-monthly, | Three, |
| 258 | U. S., | Parents, | 3 50 | 6 50 | Semi-monthly, | One, |
| 259 | U. S., | Parents, | | 9 00 | Semi-monthly, | One, |
| 260 | U. S., | Parents, | 4 00 | 7 00 | Semi-monthly, | One, |
| 261 | U. S., | Parents, | | 7 00 | Semi-monthly, | Three, |
| 262 | U. S., | Parents, | | 7 50 | Semi-monthly, | One, |
| 263 | U. S., | Strangers, | 3 25 | 7 50 | Semi-monthly, | One, |
| 264 | U. S., | Parents, | | 9 00 | Semi-monthly, | One, |
| 265 | U. S., | Housekeeping, | | 8 00 | Semi-monthly, | One, |
| 266 | U. S., | Parents, | 3 50 | 7 50 | Semi-monthly, | One, |
| 267 | U. S., | Parents, | 4 00 | 4 50 | Weekly, | One, |
| 268 | U. S., | Sister, | 4 00 | 7 00 | Semi-monthly, | One, |
| 269 | U. S., | Parents, | 5 00 | 8 00 | Semi-monthly, | Two, |
| 270 | U. S., | Parents, | | 7 00 | Semi-monthly, | Two, |
| 571 | U. S., | Parents, | | 4 50 | Semi-monthly, | One, |
| 572 | U. S., | Strangers, | 3 75 | 6 00 | Semi-monthly, | Two, |
| 573 | U. S., | Strangers, | 3 75 | 10 00 | Semi-monthly, | Two, |
| 574 | U. S., | Grandparents, | | 6 50 | Semi-monthly, | One, |
| 575 | U. S., | Parents, | | 12 00 | Semi-monthly, | One, |
| 576 | England, | Parents, | 3 25 | 6 00 | Semi-monthly, | One, |
| 577 | U. S., | Keep house, | | 7 50 | Semi-monthly, | Two, |
| 578 | U. S., | Keep house, | | 7 00 | Semi-monthly, | One, |
| 579 | U. S., | Guardian, | 7 00 | 9 00 | Semi-monthly, | Three, |
| 580 | U. S., | Parents, | 4 50 | 7 00 | Semi-monthly, | One, |
| 581 | U. S., | Strangers, | | 7 00 | Semi-monthly, | |
| 582 | U. S., | Sister, | 2 50 | 6 50 | Semi-monthly, | One, |
| 583 | U. S., | Parents, | 3 00 | 6 00 | Semi-monthly, | One, |
| 584 | U. S., | Friends, | 3 00 | 6 00 | Semi-monthly, | One, |
| 585 | U. S., | Aunt, | 3 00 | 4 00 | Semi-monthly, | Two, |
| 586 | U. S., | Strangers, | 3 50 | 10 00 | Semi-monthly, | One, |

SALESWOMEN--PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work. If less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9 | *Partly, ... | Ten days,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No men in our department, ..... | 9 | *Partly, ... | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, ... | Two weeks,..... | Yes. |
| No; $5 to $7 less per week, ..... | 10 | No, ..... | Ten days,..... | Yes. |
| Yes; the same, ..... | 9 | *Partly, .... | Two weeks,..... | Yes. |
| No men in our department, ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| No; $2 to $3 less per week, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No men in our department, ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| No; $5 less per week, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| Less, ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| No men in department, ..... | 9¼ | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 9¼ | *Partly, ... | Two weeks,..... | Yes. |
| ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No men in department, ..... | 10 | *Partly, .... | Two weeks,..... | Yes. |
| Yes; the same, ..... | 10 | Yes, ..... | Two weeks,..... | Yes. |
| Only boys at our c'nter rec've same. | 10 | Yes, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; $5 to $8 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; about $4 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; at least $3 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | ..... |
| No; from $3 to $5 less, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Ten days,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; about $2 less, ..... | 5 | Yes, ..... | Ten days,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 587 | U. S., | Parents, | $4 00 | $7 50 | Semi-monthly, | One, |
| 588 | U. S., | Parents, | | 8 00 | Semi-monthly, | One, |
| 589 | U. S., | Parents, | 4 00 | 7 00 | Semi-monthly, | One, |
| 590 | U. S., | Parents, | 2 50 | 5 00 | Semi-monthly, | Five, |
| 591 | U. S., | Strangers, | 4 00 | 7 00 | Semi-monthly, | Four, |
| 592 | U. S., | Parents, | | 5 00 | Semi-monthly, | One, |
| 593 | U. S., | Parents, | 3 50 | 6 50 | Semi-monthly, | Two, |
| 594 | U. S., | Parents, | | 8 00 | Semi-monthly, | Two, |
| 595 | U. S., | Parents, | | 10 00 | Semi-monthly, | Two, |
| 596 | U. S., | Strangers, | 3 75 | 7 00 | Weekly, | Three, |
| 597 | U. S., | Parents, | | 10 00 | Semi-monthly, | One, |
| 598 | U. S., | Grandparents, | 2 50 | 6 50 | Semi-monthly, | One, |
| 599 | U. S., | Relatives, | 5 00 | 8 50 | Semi-monthly, | One, |
| 600 | U. S., | Parents, | | 8 50 | Semi-monthly, | |
| 600¼ | U. S., | Parents, | | 5 00 | Semi-monthly, | Two |
| 600½ | U. S., | Parents, | | 5 00 | Semi-monthly, | Two |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 661 | U. S., | Parents, | | $6 50 | Semi-monthly, | Two |
| 662 | Ireland, | Strangers, | | * | Semi-monthly, | |
| 663 | U. S., | Parents, | | 5 00 | Semi-monthly, | Two, |
| 664 | U. S., | Parents, | $3 00 | 5 50 | Semi-monthly, | One, |
| 665 | U. S., | Brother, | 3 00 | 5 00 | Semi-monthly, | One, |
| 666 | U. S., | Parents, | 4 00 | 10 00 | Semi-monthly, | One, |
| 667 | U. S., | Parents, | | 7 00 | Semi-monthly, | One, |
| 668 | U. S., | Parents, | | 4 50 | Semi-monthly, | One, |
| 669 | U. S., | Strangers, | 3 25 | 6 00 | Semi-monthly, | One, |
| 670 | U. S., | Parents, | | 12 00 | Semi-monthly, | Two, |
| 671 | U. S., | Parents, | | 6 00 | Semi-monthly, | One, |
| 672 | U. S., | Parents, | | 4 50 | Semi-monthly, | One, |
| 673 | U. S., | Strangers, | 4 00 | * | Semi-monthly, | Two, |
| 674 | U. S., | Parents, | 3 00 | 7 00 | Semi-monthly, | One, |
| 675 | U. S., | Parents, | | 12 00 | Semi-monthly, | One, |
| 676 | U. S., | Parents, | 7 00 | 11 00 | Semi-monthly, | One, |

* Piece work.

## SALESWOMEN--PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 8 | Yes, ..... | Two weeks,..... | Yes. |
| No; from $5 to $10 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| No; $4 or $5 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; 40 per cent. less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 9¾ | No, ..... | Five weeks, ..... | Pd. 1 week. |
| No, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; $2 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; $2 to $3 less, ..... | 9 | No, ..... | Two weeks,..... | Yes. |

## MISCELANEOUS STORE EMPLOYES—PHILADELPHIA.

| | | | | |
|---|---|---|---|---|
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| ..... | ..... | ..... | ..... | ..... |
| ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; $5 less, ..... | 9¼ | No, ..... | Two weeks,..... | Yes. |
| No; $4 or $5 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Pd. 1 week. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| No; $1 to $1.50 less, ..... | 10 | No, ..... | Two weeks,..... | Yes. |
| ..... | ..... | No, ..... | Two weeks,..... | No. |
| ..... | 8¼ | No, ..... | Two weeks,..... | Yes. |
| The same, ..... | 9 | No, ..... | Two weeks,..... | Yes. |
| The same, ..... | 10 | No, ..... | Two weeks,..... | Yes. |

WOMEN IN INDUSTRY—.

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 677 | U. S., | Parents, | | $3 50 | Semi-monthly, | One, |
| 678 | U. S., | Parents, | $6 50 | 11 00 | Semi-monthly, | One, |
| 679 | U. S., | Brothers and sisters | | 10 00 | Semi-monthly, | |
| 680 | U. S., | Parents, | 3 00 | 9 50 | Semi-monthly, | One, |
| 681 | Ireland, | Parents, | | 8 50 | Semi-monthly, | Three, |
| 682 | Ireland, | Sister, | 3 00 | 5 00 | Semi-monthly, | Two, |
| 683 | U. S., | Parents, | | 4 00 | Semi-monthly, | One, |
| 684 | U. S., | Strangers, | 4 00 | 8 00 | Semi-monthly, | Three, |
| 685 | U. S., | Strangers, | 3 00 | 3 50 | Weekly, | Two, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 195 | U. S., | Strangers, | $3 00 | $4 00 | Weekly, | Two, |
| 196 | U. S., | Parents, | 4 00 | 6 00 | Weekly, | One, |
| 197 | U. S., | Strangers, | 7 00 | 15 00 | Weekly, | Three, |
| 198 | U. S., | Parents, | 6 00 | 6 00 | Weekly, | Two, |
| 199 | U. S., | Parents, | All. | 8 00 | Weekly, | Three, |
| 200 | U. S., | Parents, | $4 00 | 7 00 | Weekly, | Two, |
| 201 | U. S., | Myself, | | 14 00 | Weekly, | |
| 202 | U. S., | Parents, | 3 50 | 7 00 | Weekly, | Two, |
| 203 | U. S., | Parents, | 5 00 | 10 00 | Weekly, | One, |
| 204 | U. S., | Parents, | All. | 6 00 | Weekly, | Two, |
| 205 | U. S., | Parents, | $3 00 | 5 00 | Weekly, | One, |
| 206 | U. S., | Parents, | 4 00 | 6 50 | Weekly, | Two, |
| 207 | U. S., | Parents, | 5 00 | 7 00 | Weekly, | Two, |
| 208 | England, | Parents, | 3 00 | 3 00 | Weekly, | One, |
| 209 | U. S., | Parents, | 6 00 | 15 00 | Weekly, | One, |
| 210 | U. S., | Strangers, | 4 00 | 8 00 | Weekly, | Two, |
| 211 | Scotland, | Strangers, | 3 50 | 5 00 | Weekly, | One, |
| 212 | U. S., | Parents, | All. | 9 00 | Weekly, | Two, |
| 213 | U. S., | Parents, | $3 00 | 5 00 | Weekly, | Three, |
| 214 | U. S., | Parents, | 4 00 | 9 00 | Weekly, | Three, |
| 215 | U. S., | Parents, | 4 00 | 5 50 | Weekly, | Two, |
| 216 | U. S., | Parents, | 2 50 | 6 00 | Weekly, | Two, |
| 217 | U. S., | Parents, | 4 00 | 8 00 | Weekly, | Two, |
| 218 | U. S., | Parents, | 2 50 | 2 50 | Weekly, | One, |

## MISCELLANEOUS STORE EMPLOYES--PHILADELPHIA.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No; not half, | 10 | No, | Two weeks, | Yes. |
| The same, | 10 | No, | Two weeks, | Yes. |
| | 10 | No, | Two weeks, | Yes. |
| No; about $2 less, | 10 | No, | Two weeks, | Yes. |
| | 10 | No, | 2 to 4 weeks, | No. |
| No; from $3 to $4 less, | 9 | No, | No. | |
| No; about $4 less, | 10 | No, | Ten days, | Yes. |
| | 9 | No, | Two weeks, | Yes. |
| | 8 | No, | | No. |

## SALESWOMEN—PITTSBURG.

| | | | | |
|---|---|---|---|---|
| | 10 | No, | One week, | No. |
| | 9 | No, | Two weeks, | No. |
| No, | 10¼ | No, | Four weeks, | No. |
| No; one-half less, | 10¼ | No, | Two weeks, | No. |
| | 10¼ | No, | Two weeks, | No. |
| | 10 | No, | Two weeks, | No. |
| | 9 | No, | Two weeks, | No. |
| | 9¼ | No, | Two weeks, | No. |
| Yes, | 10 | No, | Indefinite, | No. |
| | 10¼ | No, | Indefinite, | No. |
| | 9 | No, | 3 to 4 weeks, | No. |
| | 10 | No, | Two weeks, | No. |
| | 10 | No, | Two weeks, | No. |
| | 10 | No, | Two weeks, | No. |
| | 9 | No, | Two weeks, | No. |
| | 10 | No, | Two weeks, | No. |
| | 10 | No, | Two weeks, | No. |
| No, | 9 | No, | Two weeks, | No. |
| $2 per week less, | 10 | No, | Unlimited, | No. |
| | 10 | No, | Two weeks, | No. |
| | 9½ | No, | Two weeks, | No. |
| No, | 10 | No, | Two weeks, | No. |
| No, | 10 | No, | Two weeks, | No. |
| No, | 9½ | No, | Two weeks, | No. |

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 219 | U. S., | Parents, | | $9 00 | Weekly, | Two, |
| 220 | U. S., | Parents, | | 4 00 | Weekly, | Two, |
| 221 | U. S., | Strangers, | $5 00 | 18 00 | Weekly, | Two, |
| 222 | U. S., | Parents, | All. | 8 00 | Weekly, | Three, |
| 223 | U. S., | Sister, | $2 50 | 4 00 | Weekly, | Two, |
| 224 | U. S., | Parents, | | 10 00 | Weekly, | Three, |
| 225 | U. S., | Parents, | | 8 00 | Weekly, | Two, |
| 226 | U. S., | Brother, | | 6 00 | Weekly, | One, |
| 227 | U. S., | Strangers, | 6 00 | 13 00 | Weekly, | Three, |
| 228 | U. S., | Parents, | | 5 00 | Weekly, | Three, |
| 229 | U. S., | Strangers, | 4 50 | 9 00 | Weekly, | Seven, |
| 230 | U. S., | Parents, | 4 00 | 8 00 | Weekly, | Three, |
| 231 | U. S., | Parents, | All. | 9 00 | Weekly, | One, |
| 232 | Prussia, | Parents, | $6 00 | 9 00 | Weekly, | One, |
| 233 | U. S., | Sister, | | 7 00 | Weekly, | Two, |
| 234 | U. S., | Parents, | 4 00 | 7 00 | Weekly, | Three, |
| 235 | U. S., | Strangers, | 4 00 | 7 00 | Weekly, | Two, |
| 236 | Ireland, | Strangers, | 7 00 | 18 00 | Weekly, | Two, |
| 237 | U. S., | Parents, | 5 50 | 12 00 | Weekly, | Three, |
| 238 | U. S., | Parents, | All. | 3 00 | Weekly, | Two, |
| 239 | U. S., | Parents, | All. | 5 00 | Weekly, | Two, |
| 240 | U. S., | Parents, | $4 00 | 15 00 | Weekly, | Five, |
| 241 | U. S., | Strangers, | 3 00 | 5 00 | Weekly, | One, |
| 242 | Germany, | Parents, | | 5 00 | Weekly, | One, |
| 243 | U. S., | Parents, | 8 00 | 8 00 | Weekly, | One, |
| 244 | Germany, | Parents, | 5 00 | 5 00 | Weekly, | One, |
| 245 | U. S., | Parents, | 3 50 | 7 00 | Weekly, | Two, |
| 246 | U. S., | Parents, | 4 00 | 7 00 | Weekly, | Two, |
| 247 | U. S., | Strangers, | 3 50 | 7 00 | Weekly, | Three, |
| 248 | U. S., | Parents, | 4 75 | 7 00 | Weekly, | One, |
| 249 | U. S., | Strangers, | 4 25 | 8 00 | Weekly, | Two, |
| 250 | U. S., | Parents, | 4 60 | 8 00 | Weekly, | Three, |
| 251 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 252 | U. S., | Parents, | | 7 00 | Weekly, | Two, |
| 253 | U. S., | Parents, | | | Weekly, | Ten, |
| 254 | U. S., | Parents, | | 5 00 | Weekly, | Two, |

SALESWOMEN—PITTSBURG.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9¼ | No, ..... | Two weeks,..... | No. |
| No, ..... | 10¼ | No, ..... | Indefinite, ..... | No. |
| No; one-half less, ..... | 9¼ | No, ..... | Two weeks,..... | No. |
| ..... | 9¼ | No, ..... | Two weeks,..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |
| No; one-half less, ..... | 9 | No, ..... | Three weeks,..... | No. |
| ..... | 9¼ | No, ..... | Two weeks,..... | No. |
| ..... | 10¼ | No, ..... | Two weeks,..... | No. |
| Yes. ..... | 10 | No, ..... | Indefinite, ..... | No. |
| ..... | 10¼ | No, ..... | Two weeks,..... | No. |
| We receive one-half as much as men | 10¼ | No, ..... | Two weeks,..... | No. |
| No; about one-half as much, .... | 9¼ | No, ..... | Two weeks,..... | No. |
| No, ..... | 9 | No, ..... | Two weeks,..... | No. |
| No; one-third less, ..... | 10 | No, ..... | Two weeks,..... | No. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| Yes, ..... | 10 | No, ..... | Two weeks,..... | No. |
| No; $7 per week less, ..... | 10 | No, ..... | Two weeks,..... | No. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| ..... | 9 | No, ..... | Indefinite, ..... | No. |
| No, ..... | 10 | No, ..... | Indefinite, ..... | No. |
| No; one-third less, ..... | 10 | No, ..... | Indefinite, ..... | No. |
| No; $15 per week less, ..... | 10 | No, ..... | Eight weeks,..... | No. |
| No; one-half less, ..... | 9 | No, ..... | Indefinite, ..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |
| No; one-half less, ..... | 10 | No, ..... | Indefinite, ..... | No. |
| No, ..... | 10 | No, ..... | Indefinite, ..... | No. |
| No, ..... | 9 | No, ..... | Indefinite, ..... | No. |
| No, ..... | 9 | No, ..... | Indefinite, ..... | No. |
| No, ..... | 10 | No, ..... | Two weeks,..... | No. |
| No, ..... | 9¼ | No, ..... | Two weeks,..... | No. |
| No, ..... | 9 | No, ..... | Indefinite, ..... | No. |
| No, ..... | 10 | No, ..... | Two weeks,..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |
| No, ..... | 9 | No, ..... | Two weeks,..... | No. |
| No, ..... | 9 | No, ..... | Two weeks,..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 255 | U. S., | Strangers, | $5 00 | $10 00 | Weekly, | One, |
| 256 | Ireland, | Parents, | 3 00 | 6 00 | Weekly, | One, |
| 257 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | Three, |
| 258 | U. S., | Parents, | 5 00 | 9 00 | Weekly, | One, |
| 259 | U. S., | Parents, | All. | 6 00 | Weekly, | One, |
| 260 | U. S., | Parents, | $5 00 | 10 00 | Weekly, | One, |
| 261 | U. S., | Parents, | 3 00 | 6 00 | Weekly, | |
| 262 | U. S., | Parents, | 4 00 | 7 00 | Weekly, | One, |
| 263 | U. S., | Sister, | 4 00 | 10 00 | Weekly, | One, |
| 264 | U .S., | Parents, | 4 50 | 4 50 | Weekly, | Three, |
| 265 | England, | Parents, | | 18 00 | Weekly, | One, |
| 266 | U. S., | Parents, | 10 00 | 15 00 | Weekly, | Two, |
| 267 | U. S., | Parents, | All. | 3 00 | Weekly, | Two, |
| 268 | U. S., | Strangers, | $4 00 | 6 00 | Weekly, | One, |
| 269 | Ireland, | Aunt, | 4 00 | 7 00 | Weekly, | Five, |
| 270 | Scotland, | Strangers, | 3 00 | 5 00 | Weekly, | Two, |
| 271 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 272 | U. S., | Parents, | All. | 10 00 | Weekly, | Two, |
| 273 | U. S., | Parents, | $4 00 | 6 00 | Weekly, | One, |
| 274 | Ireland, | Strangers, | 4 00 | 8 00 | Weekly, | One, |
| 275 | U. S., | Parents, | All. | 3 00 | Weekly, | One, |
| 276 | U. S., | Parents, | $5 00 | 8 00 | Weekly, | One, |
| 277 | U. S., | Sister, | 4 00 | 8 00 | Weekly, | Two, |
| 278 | U. S., | Parents, | All. | 8 00 | Weekly, | Three, |
| 279 | England, | Parents, | All. | 3 00 | Weekly, | One, |
| 280 | U. S., | Parents, | $3 50 | 8 00 | Weekly, | Three, |
| 281 | U. S., | Parents, | 4 00 | 8 00 | Weekly, | Three, |
| 282 | U. S., | Parents, | 5 00 | 10 00 | Weekly, | One, |
| 283 | U. S., | Parents, | All. | 18 00 | Weekly, | Two, |
| 284 | U. S., | Parents, | $3 00 | 5 00 | Weekly, | Three, |
| 285 | U. S., | Parents, | 5 00 | 7 00 | Weekly, | One, |
| 286 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | Two, |
| 287 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 288 | U. S., | Strangers, | 3 50 | 7 00 | Weekly, | Three, |
| 289 | U. S., | Parents, | 5 00 | 8 00 | Weekly, | Three, |
| 290 | U. S., | Parents, | 4 00 | 6 00 | Weekly, | One, |

SALESWOMEN—PITTSBURG.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No; $5 per week less, ..... | 9 | No, ..... | Two weeks,..... | No. |
| No; $4 per week less, ..... | 9 | No, ..... | Two weeks,..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |
| No; $3 per week less, ..... | 9 | No, ..... | Two weeks,..... | No. |
| ..... | 9 | No, ..... | Indefinite, ..... | No. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| No; $3 per week less, ..... | 10 | No, ..... | Indefinite, ..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |
| ..... | 9 | No, ..... | 2 to 3 weeks,..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks,..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks,..... | No. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| ..... | 9 and 10 | No, ..... | Four weeks,..... | No. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |
| ..... | 9 and 10 | No, ..... | 2 to 4 weeks,..... | No. |
| ..... | 10 | No, ..... | Time asked for,..... | No. |
| ..... | 9 and 10 | No, ..... | 2 to 4 weeks,..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks,..... | No. |
| ..... | 9 | No, ..... | Two weeks,..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks,..... | No. |
| No; not as a rule, ..... | 10 | No, ..... | 2 to 4 weeks,..... | No. |
| ..... | 9 and 10 | No, ..... | 1 to 4 weeks,..... | No. |
| About one-half, ..... | 10 | No, ..... | Two weeks,..... | No. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| About one-half, ..... | 10 | No, ..... | Two weeks,..... | No. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| ..... | 10 | No, ..... | Two weeks,..... | No. |
| About one-half, ..... | ..... | ..... | ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 291 | U. S., | Parents, | | $4 00 | Weekly, | One, |
| 292 | U. S., | Parents, | All. | 8 00 | Weekly, | One, |
| 293 | U. S., | Parents, | $4 00 | 5 00 | Weekly, | One, |
| 294 | U. S., | Parents, | | 10 00 | Weekly, | Three, |
| 295 | U. S., | Parents, | 4 00 | 7 00 | Weekly, | Eight, |
| 296 | U. S., | Parents, | | 6 00 | Weekly, | Two, |
| | U. S., | Strangers, | 6 00 | 7 00 | Weekly, | Three, |
| 298 | U. S., | Parents, | 4 00 | 8 00 | Weekly, | Two, |
| 299 | U. S., | Parents, | | 6 00 | Weekly, | Four, |
| 300 | U. S., | Relatives, | | 15 00 | Weekly, | One, |
| 301 | U. S., | Parents, | 4 00 | 6 00 | Weekly, | Two, |
| 302 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | Three, |
| 303 | U. S., | Strangers, | 2 00 | 4 00 | Weekly, | Four, |
| 304 | U. S., | Parents, | 3 00 | 3 00 | Weekly, | One, |
| 305 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 306 | England, | Strangers, | 5 00 | 7 00 | Weekly, | Three, |
| 307 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 308 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 309 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 310 | U. S., | Parents, | | 4 00 | Weekly, | Two, |
| 311 | U. S., | Parents, | | 4 50 | Weekly, | One, |
| 312 | U. S., | Parents, | | 6 00 | Weekly, | Two, |
| 313 | U. S., | Parents, | | 12 00 | Weekly, | One, |
| 314 | U. S., | Parents, | | 4 00 | Weekly, | Three, |
| 315 | U. S., | Parents, | | 9 00 | Weekly, | |
| 316 | U. S., | Parents, | | 6 00 | Weekly, | Two, |
| 317 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 318 | Ireland, | Parents, | 5 00 | 6 00 | Weekly, | Four, |
| 319 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | Four, |
| 320 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 321 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 322 | U. S., | Sister, | 5 00 | 8 00 | Weekly, | One, |
| 323 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | Three, |
| 324 | U. S., | Parents, | 4 00 | 6 00 | Weekly, | |
| 325 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 326 | U. S., | Parents, | | 4 50 | Weekly, | Two, |

SALESWOMEN—PITTSBURG.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | Two weeks,..... | No |
| No, ..... | 9 and 10 | No, ..... | 1 to 4 weeks,..... | No. |
| No; one-half, ..... | 10 | No, ..... | 2 to 3 weeks,..... | No. |
| From $2 to $5 less, ..... | 9 | No, ..... | 2 to 4 weeks,..... | No. |
| ..... | 9¼ and 13¼ | No, ..... | 3 to 4 weeks,..... | No. |
| No; one-half less, ..... | 10¼ and 13¼ | No, ..... | 2 to 4 weeks,..... | No. |
| No, ..... | 10¼ | No, ..... | Two weeks,..... | No. |
| No; about one-half, ..... | 9¼ and 12¼ | No, ..... | Two weeks,..... | No. |
| No, ..... | 10¼ and 14¼ | No, ..... | Two weeks,..... | No. |
| ..... | 10 | No, ..... | Three weeks,..... | No. |
| ..... | 10½ | No, ..... | Two weeks,..... | One week. |
| ..... | 9½ | No, ..... | Two weeks,..... | No. |
| ..... | 10½ | No, ..... | Two weeks,..... | One week. |
| ..... | 10½ | No, ..... | Two weeks,..... | One week. |
| No, ..... | 10½ | No, ..... | Two weeks,..... | One week. |
| Same, ..... | 9 | No, ..... | Two weeks,..... | One week. |
| ..... | 10½ | No, ..... | Two weeks,..... | One week. |
| ..... | 10½ | No, ..... | Two weeks,..... | One week. |
| ..... | 9½ | No, ..... | Two weeks,..... | One week. |
| ..... | 10½ | No, ..... | Two weeks,..... | One week. |
| ..... | 10½ | No, ..... | Two weeks,..... | One week. |
| ..... | 10½ | No, ..... | Two weeks,..... | One week |
| ..... | 9½ | No, ..... | As long as you wish. | One week. |
| ..... | 10½ | No, ..... | ..... | ..... |
| No, ..... | 10½ | No, ..... | 2 to 4 weeks,..... | One week. |
| ..... | 10½ | No, ..... | 2 to 4 weeks,..... | One week. |
| ..... | 10½ | No, ..... | 2 to 4 weeks,..... | One week. |
| No, ..... | 10½ and 14 | No, ..... | Two weeks,..... | One week. |
| No, ..... | 9½ | No, ..... | As long as we wish, | One week. |
| ..... | 10½ | No, ..... | ..... | ..... |
| No; about one-half less, ..... | 10½ and 14 | No, ..... | Two weeks,..... | One week. |
| No, ..... | 10½ and 14 | No, ..... | 1 to 4 weeks,..... | One week. |
| No; $6 less, ..... | 9½ | No, ..... | Two weeks,..... | One week. |
| No, ..... | 9½ | ..... | Two weeks,..... | One week. |
| ..... | 10½ | No, ..... | Two weeks,..... | One week. |
| ..... | 9½ | ..... | Two weeks,..... | One week. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 327 | U. S., | Strangers, | $4 00 | $6 00 | Weekly, | Four, |
| 328 | U .S., | Parents, | | 7 00 | Weekly, | One. |
| 329 | U. S., | Parents, | 3 00 | 6 00 | Weekly, | One, |
| 330 | U. S., | Parents, | 3 00 | 3 00 | Weekly, | Two, |
| 331 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 332 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | One, |
| 333 | U. S., | Parents, | | 4 50 | Weekly, | Two, |
| 334 | U .S., | Parents, | | 4 50 | Weekly, | One, |
| 335 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | Four, |
| 336 | U. S., | Parents, | 2 00 | 3 50 | Weekly, | One, |
| 337 | U. S., | Brother, | | 2 50 | Weekly, | Two, |
| 338 | U .S., | Parents, | | 6 00 | Weekly, | Two, |
| 339 | U. S., | Parents, | 4 00 | 4 00 | Weekly, | Three, |
| 340 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | Four, |
| 341 | U. S., | Parents, | 4 00 | 6 00 | Weekly, | Four, |
| 342 | U. S., | Strangers, | 3 50 | 4 00 | Weekly, | Two, |
| 343 | U. S., | Parents, | | 4 00 | Weekly, | Three, |
| 344 | U. S., | Parents, | All. | 4 00 | Weekly, | One. |
| 345 | U. S., | Parents, | $3 50 | 7 00 | Weekly, | Five, |
| 346 | U. S., | Parents, | 4 00 | Per't'e. | Weekly, | Three, |
| 347 | U. S., | Parents, | 5 00 | 7 00 | Weekly, | One, |
| 348 | U. S., | Grandmother, | | 5 00 | Weekly, | One, |
| 349 | U. S., | Sister, | 4 00 | 7 00 | Weekly, | Two, |
| 350 | U. S., | Parents, | | 4 00 | Weekly, | Three, |
| 351 | Scotland, | Parents, | All. | 4 00 | Weekly, | One, |
| 352 | Scotland, | Parents, | All. | 5 00 | Weekly, | One, |
| 353 | U. S., | Parents, | $4 50 | $8 00 | Weekly, | Two, |
| 354 | U. S., | Parents, | 4 00 | 5 00 | Weelky, | Five, |
| 355 | U. S., | Parents, | | 4 00 | Weekly, | Two, |
| 356 | U. S., | Parents, | | | Weekly, | |
| 357 | U. S., | Parents, | | 5 50 | Weekly, | Three, |
| 358 | U. S., | Parents, | | 5 00 | Weekly, | |
| 359 | U. S., | Parents, | 3 00 | 3 50 | Weekly, | Four, |
| 360 | Germany, | Parents, | 3 00 | 4 00 | Weekly, | Three. |
| 361 | U. S., | Brother, | 4 00 | 6 00 | Weekly, | Three, |
| 362 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | One, |

SALESWOMEN—PITTSBURG.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10½ | ..... | Two weeks,..... | No. |
| No, ..... | 10½ | No, ..... | Two weeks,..... | One week. |
| No, ..... | 10½ and 14 | No, ..... | Two weeks,..... | One week. |
| ..... | 9½ | No, ..... | Two weeks,..... | One week. |
| No; one-half less, ..... | 10½ and 14 | No, ..... | Two weeks,..... | One week. |
| No; $5 less, ..... | 10½ | No, ..... | Two weeks,..... | One week. |
| No; one-third less, ..... | 10 | No, ..... | Two weeks,..... | One week. |
| No; about one-half less, ..... | 10½ and 14 | No, ..... | Two weeks,..... | One week. |
| No, ..... | 9½ | No, ..... | Two weeks,..... | One week. |
| ..... | 8 | ..... | ..... | ..... |
| ..... | 9½ | No, ..... | Two weeks,..... | One week. |
| ..... | 9½ | ..... | Two weeks,..... | ..... |
| No, ..... | 9½ | No, ..... | Four weeks,..... | One week. |
| ..... | 10½ | No, ..... | Four weeks,..... | One week. |
| No, ..... | 9½ | No, ..... | Two weeks,..... | One week. |
| ..... | 9½ | ..... | Two weeks,..... | One week. |
| No; one-half less, ..... | 10½ and 14 | No, ..... | Two weeks,..... | One week. |
| No, ..... | 9½ and 13 | No, ..... | Two weeks,..... | One week. |
| ..... | 9½ and 11½ | No, ..... | Two weeks,..... | One week. |
| No; about $2 less, ..... | 9½ | No, ..... | Two weeks,..... | One week. |
| ..... | 9½ | No, ..... | As long as I want,.. | One week. |
| No; about one-half less, ..... | 9½ and 11½ | Sometimes, | Two weeks,..... | One week. |
| No, ..... | 9½ and 11½ | No, ..... | Two weeks,..... | One week. |
| ..... | 9½ | No, ..... | Two weeks,..... | One week. |
| ..... | 9½ | No, ..... | Two weeks,..... | One week. |
| ..... | 9½ | No, ..... | Two weeks,..... | One week. |
| No, ..... | 9½ | No, ..... | Two weeks,..... | One week. |
| ..... | 9½ | No, ..... | ..... | ..... |
| ..... | 9½ and 11½ | No, ..... | Two weeks,..... | No. |
| ..... | 10 | No, ..... | Two weeks,..... | One week. |
| ..... | 10½ | No, ..... | Two weeks,..... | One week. |
| ..... | 10 | ..... | Two weeks,..... | One week. |
| No; more than half less, ..... | 9½ and 11½ | No, ..... | Two weeks,..... | No. |
| No, ..... | 10 | No, ..... | Two weeks,..... | One week. |
| No; about $8 less, ..... | 9½ | No, ..... | Three weeks,..... | One week. |
| No, ..... | 9½ | No, ..... | As long as I wish, | One week. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 363 | U. S., | Sister, | | $6 00 | Weekly, | Three, |
| 364 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 365 | U. S., | Parents, | $4 00 | 7 00 | Weekly, | Two, |
| 366 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 367 | U. S., | Parents, | 5 00 | 9 00 | Weekly, | One, |
| 368 | U. S., | Parents, | 2 50 | 4 00 | Weekly, | Two, |
| 369 | England, | Parents, | | 3 00 | Weekly, | Two, |
| 370 | U. S., | Parents, | | 3 00 | Weekly, | Two, |
| 371 | Germany, | Parents, | | 7 00 | Weekly, | Three, |
| 372 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 373 | Ireland, | Parents, | | 4 00 | Weekly, | Two, |
| 374 | U. S., | Parents, | | 7 00 | Weekly, | Four, |
| 375 | U. S., | Parents, | 4 00 | 4 00 | Weekly, | Two, |
| 376 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 377 | U. S., | Parents, | | 6 00 | Weekly, | |
| 378 | U. S., | Sister, | 2 50 | 5 00 | Weekly, | Four, |
| 379 | U. S., | Parents, | 5 00 | 7 50 | Weekly, | One, |
| 380 | England, | Sister, | 6 00 | 18 00 | Weekly, | Five, |
| 381 | U. S., | Parents, | 3 50 | 9 00 | Weekly, | Three, |
| 382 | U. S., | Aunt, | 3 00 | 6 00 | Weekly, | Two, |
| 383 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | |
| 384 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 385 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | One, |
| 386 | U. S., | Brother, | All, | 6 00 | Weekly, | Two, |
| 387 | U. S., | Brother, | | 12 00 | Weekly, | Two, |
| 388 | U. S., | Strangers, | $5 00 | | | Two, |
| 389 | U. S., | Parents, | | 9 00 | Weekly, | Two, |
| 390 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 391 | U. S., | Parents, | All, | 5 00 | Weekly, | One, |
| 392 | U. S., | Relatives, | | 6 00 | Weekly, | Two, |
| 393 | U. S., | Parents, | | 6 50 | Weekly, | Two, |
| 394 | U. S., | Parents, | | 7 00 | Weekly, | Two, |
| 395 | U. S., | Parents, | All, | 10 00 | Weekly, | Two, |
| 396 | Ireland, | Strangers, | $5 00 | 8 00 | Weekly, | One, |
| 397 | U. S., | Strangers, | 6 75 | 15 00 | Weekly | Two, |
| 398 | U. S., | Strangers, | 3 00 | 6 00 | Weekly, | Four, |

SALESWOMEN—PITTSBURG.

| Do you receive the same compensation as a man for the same class of work, If less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, If so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9½ | No, ..... | Two weeks,..... | Yes. |
| ..... | 9½ and 11½ | No, ..... | One week,..... | Yes. |
| ..... | 9½ | No, ..... | Two weeks,..... | No. |
| ..... | 10½ | No, ..... | Two weeks,..... | One week. |
| No, ..... | 9½ and 11½ | No, ..... | Two weeks,..... | One week. |
| No, ..... | 9½ | No, ..... | Two weeks,.. | One week. |
| ..... | 10 and 12 | No, ..... | No,..... | No. |
| ..... | 10½ and 13 | ..... | ..... | ..... |
| ..... | 10½ | No, ..... | 2 weeks,..... | No. |
| ..... | 9½ | No, ..... | 2 weeks,..... | No. |
| ..... | 9½ & 11½(s), | ..... | ..... | ..... |
| No; about two-thirds less, ..... | 9½ | No, ..... | ..... | No. |
| ..... | 9½ | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | ..... | 2 weeks,..... | ..... |
| ..... | 9½ | No, ..... | Different periods, . | One week. |
| ..... | 9 & 12 (s), | No, ..... | 2 to 4 weeks, ..... | No. |
| No; not half as much, ..... | 9 & 13 (s), | No, ..... | 2 weeks, ..... | No. |
| ..... | 9 & 13 (s), | No, ..... | 4 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 2 to 4 weeks, ..... | No. |
| No, ..... | 9 & 14 (s), | No. ..... | 2 to 4 weeks, ..... | No. |
| No; one-third less, ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| No, ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| No; about one-half less, ..... | 9 & 13 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 13 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 8 & 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 13 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 to 4 weeks, ..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 to 4 weeks, ..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 399 | U. S., | Parents, | | $9 00 | Weekly, | Three, |
| 400 | U. S., | Sister, | $4 00 | 7 00 | Weekly, | Three, |
| 401 | U. S., | Parents, | 3 50 | 7 00 | Weekly, | Three, |
| 402 | U. S., | Strangers, | 3 50 | 6 00 | Weekly, | Two, |
| 403 | U. S., | Sister, | | 16 00 | Weekly, | Three, |
| 404 | U. S., | Parents, | | 8 00 | Weekly, | One, |
| 405 | U. S., | Parents, | 6 00 | 9 00 | Weekly, | |
| 406 | U. S., | Sister, | 4 00 | 9 00 | Weekly, | One, |
| 407 | U. S., | Parents, | 7 00 | 17 00 | Weekly, | Three, |
| 408 | U. S., | Parents, | 5 00 | 8 00 | Weekly, | One, |
| 409 | U. S., | Sister, | 4 00 | 15 00 | Weekly, | Two, |
| 410 | U. S., | Sister, | 3 00 | 5 00 | Weekly, | One, |
| 411 | U. S., | Parents, | 3 50 | 6 00 | Weekly, | Four, |
| 412 | Ireland, | Strangers, | 5 00 | 8 00 | Weekly, | One, |
| 413 | U. S., | Parents, | | 10 00 | Weekly, | Three, |
| 414 | U. S., | Parents, | All, | 7 00 | Weekly, | Three, |
| 415 | U. S., | Strangers, | $5 50 | 10 00 | Weekly, | Three, |
| 416 | U. S., | Strangers, | 4 00 | 8 00 | Weekly, | Three, |
| 417 | U. S., | Parents, | 4 00 | 5 00 | Weekly, | One, |
| 418 | U. S., | Parents, | All, | 4 00 | Weekly, | Two, |
| 419 | U. S., | Parents, | $5 00 | 5 00 | Weekly, | Three, |
| 420 | U. S., | Strangers, | 5 00 | 10 00 | Weekly, | Three, |
| 421 | U. S., | Parents, | 5 00 | 10 00 | Weekly, | Three, |
| 422 | U. S., | Parents, | 3 00 | 9 00 | Weekly, | Four, |
| 423 | U. S., | Brothers, | 5 00 | 12 00 | Weekly, | Two, |
| 424 | U. S., | Parents, | All, | 3 00 | Weekly, | Two, |
| 425 | U. S., | Parents, | $3 00 | 6 00 | Weekly, | Two, |
| 426 | U. S., | Parents, | 5 00 | 10 00 | Weekly, | Five, |
| 427 | U. S., | Parents, | All, | 5 00 | Weekly, | Two, |
| 428 | U. S., | Strangers, | $4 00 | 6 00 | Weekly, | Two, |
| 429 | U. S., | Aunt, | 4 00 | 7 00 | Weekly, | Four, |
| 430 | U. S., | Parents, | All | 8 00 | Weekly, | Three, |
| 431 | U. S., | Keeps house, | All, | 7 00 | Weekly, | One, |
| 432 | U. S., | Parents, | $4 00 | 4 00 | Weekly, | Two, |
| 433 | U. S., | Strangers, | 6 00 | 16 00 | Weekly, | Three, |
| 434 | U. S., | Parents, | All, | 10 00 | Weekly, | One, |

SALESWOMEN—PITTSBURG.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9 & 12 (s), | No, ..... | 3 weeks, ..... | No. |
| No; from $1 to $5 less, ..... | 9 & 12 (s), | No, ..... | 2 or 3 weeks, ..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 9 | No, ..... | 2 to 3 weeks, ..... | No. |
| ..... | 9¼ & 12¼(s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 9¼ & 11¼(s), | No, ..... | 2 weeks, ..... | No. |
| No; about $8 less, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| No; more than half less, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 10 | No, ..... | 3 to 4 weeks, ..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 3 weeks, ..... | No. |
| No, ..... | 9 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 weeks, ..... | No. |
| Yes, ..... | 9 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 8 | ..... | ..... | |
| ..... | 9 & 10 | No, ..... | 2 to 3 weeks, ..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 9 | No, ..... | 2 weeks, ..... | No. |
| ..... | 9 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 3 weeks, ..... | No. |
| ..... | 10 | ..... | ..... | |
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| No; about one-half less, ..... | 9¼ | No, ..... | 2 to 4 weeks, ..... | No. |
| No; about one-half less, ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 8 & 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 to 4 weeks, ..... | No. |
| No, ..... | 9 | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9¼ & 12(s), | No, ..... | 2 to 3 weeks, ..... | No. |
| No, ..... | 9 | No, ..... | 2 to 3 weeks, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 435 | U. S., | Alone, | | $20 00 | Weekly, | Two, |
| 436 | U. S., | Parents, | $6 00 | 6 00 | Weekly, | Two, |
| 437 | U. S., | Sister, | 5 50 | 8 00 | Weekly, | Three, |
| 438 | U. S., | Strangers, | 5 00 | 8 00 | Weekly, | Two, |
| 439 | U. S., | Parents, | 2 50 | 5 00 | Weekly, | Two, |
| 440 | U. S., | Strangers, | | 12 00 | Weekly, | One, |
| 441 | U. S., | Parents, | | 7 00 | Weekly, | Two, |
| 442 | U. S., | Parents, | | 12 00 | Weekly, | Three, |
| 443 | U. S., | Parents, | | 12 00 | Weekly, | One, |
| 444 | U. S., | Parents, | | 10 00 | Weekly, | Two, |
| 445 | U. S., | Strangers, | 7 00 | 17 00 | Weekly, | Two, |
| 446 | U. S., | Parents, | 4 00 | 7 00 | Weekly, | Three, |
| 447 | U. S., | Parents, | | 7 00 | Weekly, | Three, |
| 448 | U. S., | Sister, | 5 00 | 8 00 | Weekly, | One, |
| 449 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 450 | U. S., | Parents, | | 7 00 | Weekly, | Two, |
| 451 | U. S., | Keeps house, | | 8 00 | Weekly, | Three, |
| 452 | U. S., | Parents, | | 6 00 | Weekly, | Three, |
| 453 | U. S., | Parents, | | 8 00 | Weekly, | One, |
| 454 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 455 | U. S., | Parents, | | 12 00 | Weekly, | Two, |
| 456 | U. S., | Brother, | 5 00 | 12 00 | Weekly, | One, |
| 457 | U. S., | Parents, | 4 00 | 6 00 | Weekly, | Three, |
| 458 | U. S., | Parents, | 4 50 | 7 50 | Weekly, | Three, |
| 459 | U. S., | Parents, | 2 00 | 2 00 | Weekly, | Four, |
| 460 | U. S., | Parents, | 7 00 | 10 00 | Weekly, | Three, |
| 461 | U. S., | Parents, | 5 00 | 12 00 | Weekly, | Two, |
| 462 | U. S., | Parents, | 4 00 | 7 00 | Weekly, | One, |
| 463 | U. S., | Parents, | | 12 00 | Weekly, | Three, |
| 464 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 465 | U. S., | Parents, | | 8 00 | Weekly, | One, |
| 466 | U. S., | Parents, | | 7 00 | Weekly, | One, |
| 467 | U. S., | Parents, | 4 00 | 5 00 | Weekly, | Three, |
| 468 | U. S., | Parents, | 6 00 | 14 00 | Weekly, | Two, |
| 469 | U. S., | Parents, | 4 25 | 5 00 | Weekly, | Three, |
| 470 | U. S., | Parents, | | 5 00 | Weekly, | Two, |

SALESWOMEN—PITTSBURG.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No, ..... | 10 | No, ..... | 2 to 3 weeks, ..... | No. |
| ..... | 9 | No, ..... | ..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| No; $2 to $5 less, ..... | 8 & 9 | No, ..... | 2 to 4 weeks, ..... | No. |
| No, ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| No, ..... | 10 | No, ..... | 2 to 3 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | As desired, ..... | No. |
| ..... | 9 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 9 | ..... | 2 to 4 weeks, ..... | No. |
| No; $3 to $5 less, ..... | 9 | No, ..... | 4 weeks, ..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| No; $2 to $4 less, ..... | 8 & 9 | No, ..... | 3 to 4 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 12 (s), | No, ..... | As long as desired, | No. |
| ..... | 9 & 13 (s), | No, ..... | 3 weeks, ..... | No. |
| ..... | 8 & 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 9 | No, ..... | ..... | No. |
| No, ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 10 | No, ..... | As desired, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 9 | No, ..... | 2 to 4 weeks, ..... | No. |
| No, ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 9 & 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 9 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 9 | No, ..... | 2 to 4 weeks, ..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| No; about two-thirds less, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| No; about one-half less, ..... | 9 & 13 (s). | No, ..... | 2 weeks,..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 471 | U. S., | Parents, | | $12 00 | Weekly, | Three, |
| 472 | U. S., | Relatives, | | 6 00 | Weekly, | One, |
| 473 | U. S., | Keeps house, | | 5 00 | Weekly, | One, |
| 474 | U. S., | Strangers, | $7 00 | 20 00 | Weekly, | Two, |
| 475 | U. S., | Relatives, | 3 00 | 6 00 | Weekly, | One, |
| 476 | U. S., | Sister, | 3 50 | 9 00 | Weekly, | One, |
| 477 | U. S., | Parents, | 3 00 | 7 50 | Weekly, | One, |
| 478 | U. S., | Sisters, | 3 50 | 7 00 | Weekly, | Two, |
| 479 | U. S., | Parents, | 2 00 | 3 00 | Weekly, | Two, |
| 480 | U. S., | Parents, | 4 00 | 4 00 | Weekly, | Three, |
| 481 | U. S., | Parents, | 4 00 | 4 00 | Weekly, | Four, |
| 482 | U. S., | Parents, | 4 00 | 4 00 | Weekly, | One, |
| 483 | U. S., | Parents, | 3 00 | 6 00 | Weekly, | One, |
| 484 | U. S., | Strangers, | 3 00 | 5 00 | Weekly, | Three, |
| 485 | U. S., | Parents, | | 5 00 | Weekly, | Four, |
| 486 | U. S., | Parents, | | 4 00 | Weekly, | Two, |
| 487 | U. S., | Parents, | | 6 00 | Weekly, | Two, |
| 488 | U. S., | Relatives, | 4 50 | 8 00 | Weekly, | Two, |
| 489 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 490 | U. S., | Parents, | | 2 50 | Weekly, | One, |
| 491 | U. S., | Strangers, | 6 00 | 12 00 | Weekly, | Three, |
| 492 | U. S., | Strangers, | 6 00 | 15 00 | Weekly, | Five, |
| 493 | U. S., | Parents, | | 6 00 | Weekly, | Two, |
| 494 | U. S., | Parents, | 4 00 | 9 00 | Weekly, | One, |
| 495 | U. S., | Keeps house, | | 10 00 | Weekly, | Two, |
| 496 | U. S., | Parents, | 3 00 | 3 00 | Weekly, | Two, |
| 497 | U. S., | Parents, | 3 50 | 5 50 | Weekly, | Two, |
| 498 | U. S., | Parents, | | 6 00 | Weekly, | Two, |
| 499 | U. S., | Strangers, | 5 00 | 8 00 | Weekly, | Three, |
| 500 | U. S., | Strangers, | 5 00 | 8 00 | Weekly, | Two, |
| 501 | U. S., | Strangers, | 4 00 | 7 00 | Weekly, | Two, |
| 502 | U. S., | Strangers, | 4 00 | 7 00 | Weekly, | Four, |
| 503 | U. S., | Parents, | 3 00 | 6 00 | Weekly, | Two, |
| 504 | U. S., | Uncle, | 3 75 | 6 00 | Weekly, | One, |
| 505 | U. S., | Parents, | 3 00 | 8 00 | Weekly, | Three, |
| 506 | U. S., | Husband, | 5 50 | 10 00 | Weekly, | Two, |

SALESWOMEN—PITTSBURG.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10½ & 14 (s), | No, ..... | 2 weeks,..... | No. |
| No; about $6 less, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 8 & 9 | No, ..... | As desired, ..... | No. |
| ..... | 9 | No, ..... | ..... | No. |
| ..... | 9 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks,..... ..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | As desired, ..... | No. |
| No, ..... | 10 | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9½ & 13½(s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9½ & 13½(s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 10 | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | ..... | No. |
| ..... | 10 | No, ..... | ..... | No. |
| ..... | 9½ | No, ..... | 2 weeks,..... | No. |
| ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| No; about $4 less, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9¼ & 12¼(s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| No; about $5 less, ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| Yes, ..... | 10 & 14 (s), | No, ..... | 4 weeks, ..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| No; about one-half less, ..... | 9¼ & 13¾(s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9½ & 12(s), | ..... | 2 weeks,..... | No. |
| No; $4 less, ..... | 10 | No, ..... | 2 weeks,..... | No. |
| ..... | 10 | No, ..... | 2 weeks,..... | No. |
| ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9¼ & 12¼(s), | No, ..... | 2 weeks,..... | No. |
| No; one-half less, ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 4 to 12 weeks,..... | No |
| ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| I think not, ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| No; about $5 less, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 507 | U. S., ..... | Grandparents, ..... | $4 00 | $9 50 | Weekly,..... | One, .... |
| 508 | U. S., ..... | Parents, ..... | ..... | 6 00 | Weekly,..... | Three, .. |
| 509 | U. S., ..... | Strangers, ..... | 5 25 | 8 00 | Weekly,..... | Three, .. |
| 510 | U. S., ..... | Keeps house, ..... | ..... | 7 50 | Weekly,..... | One, .... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 511 | U. S., ..... | Parents, ..... | ..... | $6 00 | Weekly,..... | One, .... |
| 512 | U. S., ..... | Relatives, ..... | ..... | 2 00 | Weekly,..... | One, .... |
| 513 | U. S., ..... | Parents, ..... | $5 00 | 7 00 | Weekly,..... | One, .... |
| 514 | U. S., ..... | Parents, ..... | ..... | 2 00 | Weekly,..... | One, .... |
| 515 | U. S., ..... | Parents, ..... | 4 50 | 5 50 | Weekly,..... | One, .... |
| 516 | U. S., ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | Two, ... |
| 517 | U. S., ..... | Parents, ..... | ..... | 6 50 | Weekly,..... | One, .... |
| 518 | U. S., ..... | Parents, ..... | ..... | 2 00 | Weekly,..... | One, .... |
| 519 | U. S., ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | One, .... |
| 520 | U. S., ..... | Parents, ..... | 2 75 | 4 00 | Weekly,..... | Two, .. |
| 521 | U. S., ..... | Parents, ..... | 5 00 | 9 00 | Weekly,..... | One, .... |
| 522 | U. S., ..... | Parents, ..... | ..... | 15 00 | Weekly,..... | One, .... |
| 523 | Germany, ..... | Sister, ..... | 6 00 | 12 00 | Weekly,..... | Three, .. |
| 524 | U. S., ..... | Parents, ..... | 2 00 | 2 50 | Weekly,..... | One, .... |
| 525 | U. S., ..... | Sister, ..... | ..... | 4 00 | Weekly,..... | One, .... |
| 526 | U. S., ..... | Sister, ..... | 4 50 | 10 00 | Weekly,..... | Five, ... |
| 527 | U. S., ..... | Strangers, ..... | 5 00 | 16 00 | Weekly,..... | Four, ... |
| 528 | Austria, ..... | Strangers, ..... | ..... | 9 00 | Weekly,..... | One, .... |
| 529 | Germany, ..... | Parents, ..... | ..... | 5 00 | Weekly,..... | Five, ... |
| 530 | U. S., ..... | Parents, ..... | ..... | 15 00 | Weekly,..... | ..... |
| 531 | Scotland, ..... | Parents, ..... | ..... | 7 00 | Weekly,..... | ..... |
| 532 | U. S., ..... | Parents, ..... | ..... | 18 00 | Weekly,..... | Seven. |
| 533 | U. S., ..... | Parents, ..... | ..... | 4 50 | Weekly,..... | One, .... |
| 534 | U. S., ..... | Parents, ..... | ..... | 6 00 | Weekly,..... | Two, ... |
| 535 | U. S., ..... | Parents, ..... | ..... | 8 00 | Weekly,..... | Two, ... |
| 536 | U. S., ..... | Parents, ..... | ..... | 10 00 | Weekly,..... | Two, ... |
| 537 | U. S., ..... | Parents, ..... | ..... | 8 00 | Weekly,..... | Three, .. |
| 538 | U. S., ..... | Parents, ..... | ..... | 10 00 | Weekly,..... | Three, .. |
| 539 | U. S., ..... | Parents, ..... | 5 00 | 6 00 | Weekly,..... | Two ... |

SALESWOMEN—PITTSBURG.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9 | No, ..... | As desired, ..... | One week |
| ..... | 9½ | No, ..... | 2 weeks, ..... | One week. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |

MILLINERS—PITTSBURG.

| | | | | |
|---|---|---|---|---|
| ..... | 9 & 12 (s), | No, ..... | 10 to 14 weeks, .... | No. |
| ..... | 9 & 12 (s), | No, ..... | 5 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 8 weeks, ..... | No. |
| ..... | 9 | No, ..... | 5 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 8 weeks, ..... | No. |
| ..... | 10 & 14 (s), | No, ..... | 9 weeks, ..... | No. |
| ..... | 9 & 12½(s), | No, ..... | 9 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 9 weeks, ..... | No. |
| ..... | 9 & 12½(s), | No, ..... | 8 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 16 weeks, ..... | No. |
| No; from $20 to $25 less per week, | 9 & 12 (s), | No, ..... | 5 to 8 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 8 weeks, ..... | No. |
| ..... | 10 & 14 (s), | No, ..... | 8 to 16 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 8 weeks, ..... | No. |
| ..... | 9 & 12½(s), | No, ..... | 8 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 3 to 6 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 10 & 14 (s), | No, ..... | 10 to 15 weeks, ..... | No. |
| | 10 | No, ..... | 4 to 8 weeks, ..... | No. |
| ..... | 10 & 14 (s), | No, ..... | 8 to 10 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 9 | No, ..... | 8 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No. ..... | ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | ..... | No. |
| ..... | 9 & 12 (s), | No. ..... | 6 weeks, ..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 6 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 6 weeks, ..... | No. |
| ..... | 9 | No, ..... | ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 540 | U. S., | Parents, | $5 00 | $7 00 | Weekly, | One, |
| 541 | Ireland, | Parents, | | 5 00 | Weekly, | One, |
| 542 | U. S., | Parents, | | 3 50 | Weekly, | One, |
| 543 | U. S., | Parents, | | 6 00 | Weekly, | Three, |
| 544 | U. S., | Parents, | | 5 00 | Weekly, | Five, |
| 545 | U. S., | Parents, | 5 00 | 11 00 | Weekly, | Three, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 559 | Germany, | Strangers, | $4 00 | $8 50 | Weekly, | Two, |
| 560 | U. S., | Sister, | 5 00 | 5 00 | Weekly, | Three, |
| 561 | England, | Parents, | 3 50 | 6 00 | Weekly, | Two, |
| 562 | U. S., | Grandparents, | 4 00 | 8 00 | Weekly, | Three, |
| 563 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 564 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 565 | U. S., | Parents, | | 9 00 | Weekly, | Three, |
| 566 | U. S., | Parents, | | 7 00 | Weekly, | One, |
| 567 | U. S., | Strangers, | 3 50 | 5 00 | Weekly, | Two, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 546 | (m) U. S., | Parents, | | $6 00 | Weekly, | One, |
| 547 | (m) U. S., | Parents, | | 18 00 | Weekly, | Four, |
| 548 | (m) U. S., | Parents, | | 4 00 | Weekly, | One, |
| 549 | (m) U. S., | Parents, | $4 00 | 5 50 | Weekly, | Three, |
| 550 | (m) U. S., | Parents, | | 4 50 | Weekly, | One, |
| 552 | (m) U. S., | Parents, | 5 00 | 12 00 | Weekly, | One, |
| 553 | Austria, | Strangers, | 4 00 | 6 00 | Weekly, | Two, |
| 554 | (s) U. S., | Strangers, | 4 00 | 9 00 | Semi-monthly, | Two, |
| 555 | (c) U. S., | Parents, | | 6 00 | Weekly, | Two, |
| 556 | (c) U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 557 | (s) U. S., | Parents, | | 15 00 | Monthly, | Three, |
| 558 | (s) U. S., | Strangers, | 5 00 | 7 00 | Weekly, | One, |

* 551 on page 4, a Philadelphia saleslady; m stands for milliner; s for stenographer; c for copyist.

MILLINERS—PITTSBURG.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9 & 12 (s), | No, ..... | 8 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 11 weeks, ..... | No. |
| ..... | 9 | No, ..... | 4 to 8 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 4 weeks, ..... | No. |
| ..... | 9½ | No, ..... | 12 weeks, ..... | No. |
| ..... | 9½ | No, ..... | ..... | No. |

DRESSMAKERS—PITTSBURG.

| | | | | |
|---|---|---|---|---|
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9½ | No, ..... | 2 to 8 weeks, ..... | No. |
| ..... | 9½ | No, ..... | 2 to 16 weeks,..... | No. |
| ..... | 9½ | No, ..... | ..... | No. |
| ..... | 9½ | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 9 | No, ..... | As desired, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | ..... | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | ..... | No. |

MISCELLANEOUS—PITTSBURG.

| | | | | |
|---|---|---|---|---|
| ..... | 9½ & 12 (s), | No, ..... | 8 to 12 weeks, .... | No. |
| ..... | 9½ | No, ..... | 12 weeks, ..... | No. |
| ..... | 9½ | No, ..... | 8 weeks, ..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 8 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 8 weeks, ..... | No. |
| ..... | 9 & 13 (s), | No, ..... | 1 week, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | Yes. |
| No; about $8 less, ..... | 7½ | Yes, ..... | 2 weeks,..... | No. |
| ..... | 10 | No, ..... | 2 weeks,..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | Yes. |
| ..... | ..... | Yes, ..... | 3 weeks, ..... | No. |
| No; $5 per week less, ..... | 9 | No, ..... | 26 weeks, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 61 | U. S., | Parents, | | $3 50 | Weekly, | Two, |
| 62 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 63 | U. S., | Guardian, | | 3 50 | Weekly, | Two, |
| 64 | U. S., | Parents, | | 4 50 | Weekly, | One, |
| 65 | U. S., | Parents, | | 2 50 | Weekly, | Two, |
| 66 | U. S., | Parents, | | 3 50 | Weekly, | One, |
| 67 | U. S., | Parents, | $3 00 | 9 00 | Weekly, | Three, |
| 68 | U. S., | Parents, | | 4 00 | Weekly, | Two, |
| 69 | U. S., | Parents, | | 4 00 | Weekly, | Three, |
| 70 | U. S., | Parents, | | 4 00 | Weekly, | |
| 71 | U. S., | Parents, | 2 00 | 5 00 | Weekly, | One, |
| 72 | U. S., | Relatives, | 4 00 | 8 00 | Weekly, | Three, |
| 73 | U. S., | Parents, | 3 00 | 8 00 | Weekly, | Two, |
| 74 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 75 | U. S., | Aunt, | 2 50 | 7 00 | Semi-monthly, | |
| 76 | U. S., | Parents, | | 6 00 | Weekly, | Three, |
| 77 | U. S., | Parents, | | 3 00 | Weekly, | Five, |
| 78 | U. S., | Sisters, | | 4 00 | Weekly, | Two, |
| 79 | U. S., | Aunt, | | 6 00 | Weekly, | Three, |
| 80 | U. S., | Brother, | 2 00 | 6 00 | Weekly, | Three, |
| 81 | Russia, | Parents, | | 8 00 | Weekly, | Five, |
| 82 | U. S., | Parents, | | 6 00 | Weekly, | Two, |
| 83 | U. S., | Parents, | | 3 00 | Weekly, | Two, |
| 84 | U. S., | Parents, | | 5 00 | Weekly, | Three, |
| 85 | U. S., | Parents, | | 3 00 | Weekly, | Two, |
| 86 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 87 | U. S., | Parents, | | 3 00 | Weekly, | Two, |
| 88 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 89 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 90 | U. S., | Strangers, | 3 50 | 7 00 | Weekly, | Two, |
| 31 | U. S., | Parents, | | 6 00 | Weekly, | Two, |
| 32 | U. S., | Parents, | | 8 00 | Weekly, | One, |
| 33 | U. S., | Parents, | | 10 00 | Weekly, | One, |
| 34 | U. S., | Parents, | | 10 00 | Weekly, | Two, |
| 35 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 36 | U. S., | Parents, | 3 00 | 12 00 | Weekly, | One, |

SALESWOMEN—LUZERNE COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9 to 12½ | No, ..... | 2 weeks,..... | No. |
| ..... | 9 to 12½ | No, ..... | 2 weeks,..... | No. |
| ..... | 9 to 12½ | No, ..... | 2 weeks, ..... | Pd. 1 week. |
| ..... | 9 to 12½ | No, ..... | 2 weeks, ..... | Pd. 1 week. |
| ..... | 9 | No, ..... | 2 weeks, ..... | ..... |
| ..... | 9 to 12½ | No, ..... | 2 weeks,..... | No. |
| No; one-half less, ..... | 9½ to 11½ | No, ..... | 2 weeks,..... | No. |
| No; one-half less, ..... | 9½ to 11½ | No, ..... | 2 weeks,..... | No. |
| No; from $5 to $10 less, ..... | 9½ to 11½ | No, ..... | Yes, ..... | No. |
| No; from $5 to $8 less, ..... | 9½ to 11½ | No, ..... | Yes, ..... | No. |
| ..... | 9½ to 11½ | No, ..... | 2 weeks,..... | No. |
| No; one-half less, ..... | 9½ to 12 | No, ..... | 2 weeks,..... | No. |
| No; one-half less, ..... | 9½ to 11½ | No, ..... | 10 days, ..... | No. |
| No; about $10 less, ..... | 9½ to 11½ | No, ..... | 2 weeks,..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | Yes. |
| No; $4 to $9 less, ..... | 9½ to 11½ | No, ..... | 2 weeks,..... | No. |
| ..... | 9½ to 11½ | No, ..... | 10 days, ..... | No. |
| Less, ..... ..... | 9½ to 11½ | No, ..... | 10 days, ..... | No. |
| No; from $5 to $10 less, ..... | 9½ to 11½ | Yes, ..... | 10 days, ..... | No. |
| No; from $3 to $4 less, ..... | 9½ to 11½ | No, ..... | 10 days, ..... | No. |
| No; at least $5 less, ..... | 9½ to 11½ | No, ..... | 10 days, ..... | No. |
| No; from $5 to $10 less, ..... | 9½ to 11½ | No, ..... | 10 days, ..... | No. |
| No; about $5 less, ..... | 9½ to 11½ | No, ..... | 1 week, ..... | No. |
| ..... | 9½ to 11½ | No, ..... | 2 weeks,..... | No. |
| No; $7 less, ..... | 10½ | No, ..... | 2 weeks,..... | No. |
| No; about $5 less, ..... | 9½ to 11½ | No, ..... | As desired, ..... | No. |
| No; about one-half less, ..... | 9½ to 11½ | No, ..... | As desired, ..... | No. |
| ..... | 9½ to 11½ | No, ..... | As desired, ..... | No. |
| No, ..... | 9½ to 11½ | No, ..... | 2 weeks,..... | No. |
| No; about one-half less, ..... | 9½ to 11½ | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 12 | No, ..... | 2 weeks,..... | No. |
| No; from $4 to $7 less, ..... | 9½ | Sometimes, . | 8 days, ..... | Yes. |
| No; about one-half less, ..... | 9 & 12 | No, ..... | 2 weeks,..... | No. |
| No; less, ..... | 9 & 12 | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 12 | Yes, ..... | 2 weeks,..... | No. |
| ..... | 10 & 14 | Yes, ..... | As desired, ..... | No. |

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 37 | U. S., | Parents, | $3 00 | $5 00 | Weekly, | Two, |
| 38 | England, | Parents, | | 6 00 | Weekly, | One, |
| 39 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 40 | U. S., | Sister, | 2 50 | 7 00 | Weekly, | Three, |
| 41 | U. S., | Parents, | | 4 00 | Weekly, | Two, |
| 42 | U. S., | Relatives, | 2 00 | 4 00 | Weekly, | One, |
| 43 | U. S., | Parents, | 2 50 | 6 00 | Weekly, | One, |
| 44 | U. S., | Parents, | 4 00 | 8 00 | Weekly, | One, |
| 45 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 46 | U. S., | Parents, | 2 50 | 6 00 | Weekly, | Two, |
| 47 | U. S., | Parents, | 6 00 | 12 00 | Weekly, | Six, |
| 48 | U. S., | Parents, | 2 50 | 5 00 | Weekly, | One, |
| 49 | U. S., | Parents, | 4 00 | 8 00 | Weekly, | Three, |
| 50 | U. S., | Parents, | 4 00 | 6 00 | Weekly, | One, |
| 51 | U. S., | Parents, | 3 00 | 6 00 | Weekly, | One, |
| 52 | U. S., | Aunt, | | 5 00 | Weekly, | Two, |
| 53 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 54 | U. S., | Stranger, | 4 50 | 12 00 | Weekly, | Three, |
| 55 | Wales, | Parents, | 3 00 | 5 00 | Weekly, | Three, |
| 56 | U. S., | Sister, | 2 00 | 5 00 | Weekly, | Two, |
| 57 | U. S., | Parents, | 2 00 | 2 50 | Weekly, | Two, |
| 58 | U. S., | Parents, | | 10 00 | Weekly, | One, |
| 59 | U. S., | Parents, | 5 00 | 8 00 | Weekly, | Two, |
| 60 | U. S., | Parents, | | 3 50 | Weekly, | One, |
| 1 | U. S., | Parents, | | 7 00 | Weekly, | One, |
| 2 | U. S., | Relatives, | | 9 00 | Weekly, | One, |
| 3 | U. S., | Relatives, | | 15 00 | Weekly, | Four, |
| 4 | U. S., | Parents, | | 10 00 | Weekly, | One, |
| 5 | U. S., | Parents, | 3 00 | 7 50 | Weekly, | One, |
| 6 | Austria, | Parents, | | 4 00 | Weekly, | One, |
| 7 | England, | Parents, | | 10 00 | Weekly, | One, |
| 8 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 9 | U. S., | Parents, | | 10 00 | Weekly, | Three, |
| 10 | U. S., | Guardian, | 2 50 | | Weekly, | One, |
| 11 | U. S., | Parents, | 3 00 | 6 00 | Weekly, | One, |
| 12 | U. S., | Aunt, | 3 00 | 5 00 | Weekly, | Three, |

SALESWOMEN—LUZERNE COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No; about $5 less, | 9 & 12 | Yes, | 2 weeks, | No. |
| No; from $3 to $5 less, | 9 & 12 | No, | 8 days, | No. |
| | 9 & 12 | Yes, | 2 weeks, | No. |
| | 9 & 12 | Yes, | Yes, | No. |
| No; less, | 9 & 12 | Yes, | Sometimes, | No. |
| No; less, | 8 to 11 | Yes, | 10 days, | Yes. |
| No; less, | 9 to 12 | Sometimes, | 10 days, | Yes. |
| No; less, | 10 to 14 | Yes, | 3 weeks, | No. |
| No; from $3 to $5 less, | 9 to 12 | Sometimes, | 8 days, | Yes. |
| No; less, | 9 to 12 | Yes, | 10 days, | No. |
| No; less, | 9 to 12 | No, | If desired, | No. |
| No; less, | 10 | Yes, | 10 days, | Yes. |
| No; one-half less, | 9 to 12 | Sometimes, | 10 days, | Yes. |
| No; less, | 9 to 12 | Yes, | 10 days, | Yes. |
| No; less, | 9 to 12 | Sometimes, | 10 days, | Yes. |
| No; about one-half less, | 9 to 12 | Yes, | 5 days, | Yes. |
| | 9 to 12 | No, | 3 weeks, | No. |
| | 9 to 12 | No, | Yes, | No. |
| | 9 to 12 | No, | Yes, | No. |
| | 9 to 12 | No, | Yes, | No. |
| | 9½ | No, | Yes, | No. |
| Yes, | 9½ | No, | Yes, | No. |
| No, | 9½ | No, | Yes, | No. |
| | 9 | No, | Yes; one week, | Yes. |
| | 9 & 12 | No, | If you desire it, | No. |
| | 9 & 12 | No, | If you desire it, | No. |
| | 9 & 11 | No, | 2 to 4 weeks, | No. |
| | 9 & 12 | No, | 2 to 4 weeks, | No. |
| No; less, | 9 & 12 | No, | 2 to 4 weeks, | No. |
| | 9 & 12 | No, | 2 to 4 weeks, | No. |
| No, | 9 & 12 | No, | 2 to 4 weeks, | No. |
| | 9 & 12 | No, | 2 to 4 weeks, | No. |
| | 9 & 12 | No, | 2 to 4 weeks, | No. |
| | 9½ | Yes, | As desired, | No. |
| | 9 & 12 | No, | 2 to 4 weeks, | No. |
| No; about $3 less, | 9 & 12 | Sometimes, | 10 days, | Yes. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 13 | U. S., | Parents, | | $5 00 | Weekly, | Two, |
| 14 | U. S., | Sister, | $3 00 | 9 00 | Weekly, | Two, |
| 15 | Scotland, | Parents, | | 5 00 | Weekly, | Four, |
| 16 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 17 | U. S., | Strangers, | 3 50 | 5 00 | Weekly, | Three, |
| 18 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 19 | U. S., | Parents, | 5 00 | 8 00 | Weekly, | One, |
| 20 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 21 | England, | Parents, | | 4 00 | Weekly, | One, |
| 22 | U. S., | Parents, | 3 00 | 6 00 | Weekly, | One, |
| 23 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 24 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 25 | U. S., | Parents, | | 3 50 | Weekly, | Two, |
| 26 | U. S., | Parents, | 4 00 | 5 00 | Weekly, | Three, |
| 27 | U. S., | Parents, | 3 50 | 5 00 | Weekly, | One, |
| 28 | U. S., | Parents, | | 7 00 | Weekly, | One, |
| 29 | U. S., | Parents, | 4 00 | 7 00 | Weekly, | Three, |
| 30 | U. S., | Parents, | | 12 00 | Weekly, | Two, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 91 | Austria, | Parents, | | $4 75 | Semi-monthly, | Two, |
| 92 | South Wales, | Parents, | | 7 20 | Semi-monthly, | Two, |
| 93 | U. S., | Grandparents, | $2 00 | 3 50 | Semi-monthly, | Three, |
| 94 | U. S., | Parents, | | 3 00 | Semi-monthly, | One, |
| 95 | South Wales, | Parents, | | 4 75 | Semi-monthly, | One, |
| 96 | U. S., | Parents, | | 3 60 | Semi-monthly, | One, |
| 97 | South Wales, | Parents, | | 3 60 | Semi-monthly, | One, |
| 98 | U. S., | Parents, | | 4 75 | Semi-monthly, | Two, |
| 99 | U. S., | Parents, | | 5 00 | Semi-monthly, | Two, |
| 100 | U. S., | Parents, | | 5 00 | Semi-monthly, | |
| 101 | U. S., | Parents, | | 3 00 | Semi-monthly, | Three, |
| 102 | U. S., | Parents, | | 6 00 | Semi-monthly, | |
| 103 | U. S., | Uncle, | | 5 76 | Semi-monthly, | Two, |
| 104 | U. S., | Parents, | | 5 00 | Semi-monthly, | |
| 111 | U. S., | Parents, | | 6 00 | Weekly, | Two, |

SALESWOMEN—LUZERNE COUNTY.

| Do you receive the same compensation as a man for the same class of work. If less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| Yes, ..... | 11 | No, ..... | 10 days, ..... | Yes. |
| ..... | 9 & 12 | No, ..... | As desired, ..... | No. |
| No; from $3 to $8 less, ..... | 9 & 12 | Yes, ..... | 10 days, ..... | Yes. |
| No; from $3 to $5 less, ..... | 9 & 12 | Sometimes, . | 10 days, ..... | Yes. |
| No, ..... | 9½ | Yes, ..... | 10 days, ..... | Yes. |
| No; from $3 to $5 less, ..... | 9 & 12 | No, ..... | 10 days, ..... | Yes. |
| No; about one-half less, ..... | 10 | ..... | 10 days, ..... | Yes. |
| No; from $3 to $5 less, ..... | 9 & 12 | No, ..... | 10 days, ..... | Yes. |
| ..... | 9 & 12 | No, ..... | 2 to 3 weeks, ..... | No. |
| No; from $2 to $4 less, ..... | 9 & 12 | No, ..... | 10 days, ..... | No. |
| ..... | 9 & 12 | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 12 | Yes, ..... | 2 weeks,..... | No. |
| No, ..... | 9 & 12 | No, ..... | No, ..... | ..... |
| No, ..... | 9 & 12 | No, ..... | 2 weeks,..... | No. |
| No; about two-thirds less, ..... | 9 & 12 | No, ..... | 10 days, ..... | Yes. |
| No; one-half less, ..... | 10 & 14 | No, ..... | 1 week, ..... | Yes. |
| No; from $3 to $5 less, ..... | 9 & 12 | No, ..... | 8 days, ..... | Yes. |
| No; less, ..... | 9 & 12 | No, ..... | 2 or 3 weeks, ..... | No. |

MISCELLANEOUS—LUZERNE COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 10 | No, ..... | 2 weeks,..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | ..... | No. |
| ..... | 10 | No, ..... | 2 weeks,..... | No. |
| ..... | 10 | No, ..... | 2 weeks,..... | No. |
| ..... | 10 | No, ..... | 2 weeks,..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 2 weeks,..... | No. |
| ..... | 10 | Yes, ..... | 2 weeks, ..... | Yes. |
| ..... | 10 | Yes, ..... | 2 weeks, ..... | Yes. |
| ..... | 10 | No, ..... | 2 weeks,..... | No. |
| ..... | 10 | Yes, ..... | 2 weeks, ..... | Yes. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | ..... | ..... |
| ..... | 10½ | No, ..... | 2 to 4 weeks, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 112 | U. S., ..... | Parents, ..... | ..... | $6 00 | Weekly,..... | One, .... |
| 113 | U. S., ..... | Parents, ..... | ..... | 9 00 | Weekly,..... | One, .... |
| 114 | U. S., ..... | Parents, ..... | $2 50 | 9 00 | Weekly,..... | Three, .. |
| 115 | U. S., ..... | Parents, ..... | ..... | 5 00 | Weekly,..... | One, .... |
| 116 | U. S., ..... | Parents, ..... | ..... | 5 00 | Weekly,..... | Two, ... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | U. S., ..... | Parents, ..... | $3 00 | $4 00 | Weekly,..... | Two, ... |
| 2 | U. S., ..... | Parents, ..... | 3 00 | 5 50 | Weekly,..... | One, .... |
| 3 | U. S., ..... | Parents, ..... | 4 50 | 15 00 | Weekly,..... | Six, ..... |
| 4 | U. S., ..... | Parents, ..... | ..... | 6 00 | Monthly,..... | Three, .. |
| 5 | U. S., ..... | Parents, ..... | ..... | 4 00 | Weekly,..... | One, .... |
| 6 | U. S., ..... | Parents, ..... | ..... | 3 00 | Weekly,..... | Two, ... |
| 7 | U. S., ..... | Parents, ..... | ..... | 5 00 | Weekly,..... | One, .... |
| 8 | U. S., ..... | Parents, ..... | ..... | 5 00 | Weekly,..... | Two, ... |
| 9 | U. S., ..... | Parents, ..... | 2 50 | 5 00 | Weekly,..... | One, .... |
| 10 | U. S., ..... | Strangers, ..... | 3 00 | 6 00 | Weekly,..... | Two, ... |
| 11 | U. S., ..... | Parents, ..... | 3 00 | 4 00 | Weekly,..... | Two, ... |
| 12 | U. S., ..... | Grand-parents, ..... | 2 00 | 4 00 | Weekly,..... | Two, ... |
| 13 | U. S., ..... | Parents, ..... | 3 00 | 7 00 | Weekly,..... | Three, .. |
| 14 | U. S., ..... | Sisters, ..... | ..... | 8 00 | Weekly,..... | Two, ... |
| 15 | U. S., ..... | Parents, ..... | ..... | 3 00 | Weekly,..... | ..... |
| 16 | U. S., ..... | Parents, ..... | 1 75 | 3 00 | Weekly,..... | One, .... |
| 17 | U. S., ..... | Parents, ..... | 3 50 | 7 00 | Weekly,..... | One, .... |
| 18 | U. S., ..... | Parents, ..... | 2 00 | 4 00 | Weekly,..... | Two, ... |
| 19 | U. S., ..... | Parents, ..... | ..... | 3 00 | Weekly,..... | Three, .. |
| 20 | U. S., ..... | Parents, ..... | 3 00 | 6 00 | Weekly,..... | Three, .. |
| 21 | U. S., ..... | Parents, ..... | 1 75 | 3 00 | Weekly,..... | Three, .. |
| 22 | U. S., ..... | Relatives, ..... | 4 00 | 5 00 | Weekly,..... | One, .... |
| 23 | U. S., ..... | Strangers, ..... | 4 00 | 18 00 | Weekly,..... | Six, ..... |
| 24 | U. S., ..... | Parents, ..... | ..... | 3 00 | Weekly,..... | Three, .. |
| 25 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | Weekly,..... | One, .... |
| 26 | U. S., ..... | Parents, ..... | 1 50 | 3 00 | Weekly,..... | One, .... |
| 27 | U. S., ..... | Sister, ..... | 4 00 | 7 00 | Weekly,..... | Two, ... |

MISCELLANEOUS—LUZERNE COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9½ to 11½ | No, ..... | 2 to 4 weeks, ..... | No. |
| The same, ..... | 10 | Yes, ..... | 10 days, ..... | Yes. |
| ..... | 9½ | Yes, ..... | 10 days, ..... | Yes. |
| ..... | 9 to 12½ | No, ..... | 2 weeks, ..... | Pd. 1 week. |
| ..... | 9 to 12½ | No, ..... | 2 weeks,..... | No. |

SALESWOMEN—ERIE COUNTY.

| | | | | |
|---|---|---|---|---|
| No, ..... | 12 | No, ..... | 2 weeks,..... | No. |
| No,* ..... | 12 | No, ..... | 2 weeks,..... | No. |
| ..... | 10 & 13 | No, ..... | 4 weeks, ..... | No. |
| ..... | 12 | No, ..... | 2 weeks,..... | No. |
| No; about $8 less, ..... | 12 | No, ..... | No, ..... | ..... |
| No; about $10.00 less, ..... | 12 & 13 | No, ..... | 2 weeks,..... | No. |
| No; about one-half less, ..... | 10 | No, ..... | 2 weeks,..... | No. |
| No; about one-half less, ..... | 10 & 14(s),* | No, ..... | 2 weeks,..... | No. |
| No; about one-half less, ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| No; about one-half less, ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No |
| No, ..... | 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 10 | No, ..... | 2 weeks,..... | No. |
| No; from $2 to $4 less, ..... | 9 & 12 (s), | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 10 | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 3 weeks, ..... | No. |
| ..... | 9 | ..... | ..... | ..... |
| No, ..... | 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 to 3 months,..... | No. |
| No, ..... | 9 | ..... | ..... | ..... |
| No, ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| Less, ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |

* Saturdays.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 28 | U. S., | Strangers. | $2 75 | $5 00 | Weekly, | Two, |
| 29 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 30 | U. S., | Guardian, | 2 50 | 5 00 | Weekly, | Two, |
| 31 | U. S., | Strangers, | 3 25 | 5 00 | Weekly, | Two, |
| 32 | U. S., | Strangers, | 6 00 | 18 00 | Weekly, | Three, |
| 33 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 34 | U. S., | Parents, | 2 25 | 4 00 | Weekly, | Two, |
| 35 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 36 | U. S., | Parents, | 4 00 | 7 00 | Weekly, | Two, |
| 37 | U. S., | Parents, | | 3 00 | Weekly, | Two, |
| 38 | U. S., | Strangers, | | 4 00 | Weekly, | One, |
| 39 | U. S., | Parents, | 2 00 | 3 00 | Weekly, | One, |
| 40 | U. S., | Parents, | 3 50 | 6 00 | Weekly, | Two, |
| 41 | U. S., | Parents, | 2 00 | 4 00 | Weekly, | Two, |
| 42 | U. S., | Parents, | | 6 00 | Weekly, | Two, |
| 43 | U. S., | Parents, | 1 25 | 5 00 | Weekly, | Two, |
| 44 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 45 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | Two, |
| 46 | U. S., | Parents, | 1 50 | 3 00 | Weekly, | One, |
| 47 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | One, |
| 48 | Canada, | Parents, | | 4 00 | Weekly, | Two, |
| 49 | U. S., | Keep house, | | 3 00 | Weekly, | Two, |
| 50 | U. S., | Parents, | | 3 00 | Weekly, | Three, |
| 51 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 52 | U. S., | Parents, | | 4 00 | Weekly, | Two, |
| 53 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 54 | U. S., | Parents, | | 9 00 | Weekly, | Two, |
| 55 | U. S., | Parents, | | 10 00 | Weekly, | One, |
| 56 | U. S., | Strangers, | 2 00 | 6 00 | Weekly, | Two, |
| 57 | U. S., | Strangers, | 4 00 | 10 00 | Weekly, | One, |
| 58 | U. S., | Parents, | | 6 00 | Weekly, | Two, |
| 59 | U. S., | Parents, | | 12 00 | Weekly, | Two, |

SALESWOMEN—ERIE COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No; less than one-half, ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| About one-half, ..... | 9 | No, ..... | 2 weeks,..... | No. |
| No; not one-half, ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| No; about one-half, ..... | 10 & 14 (s)* | No, ..... | 2 or 3 weeks, ..... | No. |
| ..... | 10 & 14 (s), | No, ..... | As long as I wish, | No. |
| No; less than one-half, ..... | 9 | No, ..... | 2 to 3 weeks, ..... | No. |
| No; less than one-half, ..... | 10 & 14 (s), | No, ..... | 2 to 3 weeks, ..... | No. |
| No; less than one-half, ..... | 10 & 14 (s), | No, ..... | 2 weeks, ..... | No. |
| No; about one-half, ..... | 9 | No, ..... | Yes, ..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 10 & 14 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 6 weeks, ..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| ..... | 9 & 12 (s), | No, ..... | 2 weeks,..... | No. |
| No, ..... | 9 | No, ..... | 2 weeks,..... | No. |
| ..... | 9 | No, ..... | 2 weeks,..... | No. |
| No; about $10 less, ..... | 12 | No, ..... | 2 weeks,..... | No. |
| ..... | 13 | No, ..... | 2 weeks,..... | No. |
| No, ..... | 13 | No, ..... | 2 weeks, ..... | No. |
| No; less than half, ..... | 10 | No, ..... | 1 week, ..... | No. |
| No; less than half, ..... | 10 | No, ..... | 1 week, ..... | No. |
| No, ..... | 13 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |

* s indicates hours of labor Saturdays.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 91 | U. S., | Parents, | | $10 00 | Monthly, | Three, |
| 92 | U. S., | Parents, | $3 00 | 5 00 | Weekly, | One, |
| 93 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 94 | U. S., | Parents, | | 7 00 | Weekly, | One, |
| 95 | U. S., | Sister, | | 3 00 | Weekly, | Three, |
| 96 | U. S., | Parents, | | 5 00 | Weekly, | Three, |
| 97 | U. S., | Parents, | | 4 50 | Weekly, | Two, |
| 98 | U. S., | Parents, | | 4 50 | Weekly, | Two, |
| 99 | U. S., | Parents, | | 5 00 | Weekly, | Three, |
| 100 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | One, |
| 101 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 102 | U. S., | Parents, | 2 50 | 5 00 | Weekly, | One, |
| 103 | U. S., | Parents, | 2 50 | 4 50 | Weekly, | Two, |
| 104 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 105 | U. S., | Stranger, | 2 25 | 4 50 | Weekly, | One, |
| 106 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 107 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 108 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 109 | U. S., | Parents, | | 3 50 | Weekly, | Two, |
| 110 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 111 | U. S., | Parents, | | 3 50 | Weekly, | One, |
| 112 | U. S., | Parents, | | 4 50 | Weekly, | One, |
| 113 | U. S., | Parents, | | 20 00 | Weekly, | One, |
| 114 | U. S., | Parents, | | 8 00 | Weekly, | One, |
| 115 | Canada, | Strangers, | 4 00 | 12 00 | Weekly, | Two, |
| 116 | U. S., | Parents, | | 11 25 | Monthly, | One, |
| 117 | U. S., | Sister, | 3 50 | 6 00 | Weekly, | One, |
| 118 | U. S., | Parents, | 2 50 | 6 00 | Weekly, | One, |
| 119 | U. S., | Parents, | | 9 00 | Monthly, | Four, |
| 120 | U. S., | Stranger, | 2 50 | 6 25 | Monthly, | Eight, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 121 | U. S., | Parents, | | $4 00 | Monthly, | One, |
| 122 | U. S., | Parents, | | 4 75 | Semi-monthly, | Two, |
| 123 | U. S., | Sister, | $2 00 | * | Weekly, | One, |

* Piece work.

PRESS EMPLOYES AND BOOKKEEPERS—ERIE COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No, ..... | 12 | ..... | 2 weeks, ..... | No. |
| Yes; for the work I do, ..... | 6½ | Yes, ..... | 2 weeks, ..... | Yes. |
| ..... | 10 | Yes, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 6½ | No, ..... | No, ..... | ..... |
| No; $5 less, ..... | 10 | No, ..... | No, ..... | ..... |
| Yes, ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| Yes, ..... | 10 to 13 | No, ..... | 2 weeks, ..... | No. |
| Yes, ..... | 10 to 13 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| Yes, ..... | 10 to 13 | No, ..... | 2 weeks, ..... | No. |
| Yes, ..... | 10 to 13 | No, ..... | 2 weeks, ..... | No. |
| Yes, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| Yes, ..... | 10 | Yes, ..... | 2 to 3 weeks, ..... | Yes. |
| ..... | 7 | Yes, ..... | 2 weeks, ..... | Yes. |
| Same as a man for same work,.. | 10½ | Yes, ..... | 1 week, ..... | Yes. |
| No; $4 less, ..... | 10 | Yes, ..... | 1 week, ..... | Yes. |
| No; about $6 less, ..... | 9 to 10 | Yes, ..... | 2 weeks, ..... | Yes. |
| The same for this class of work,. | 10 to 14 | Yes, ..... | 2 weeks, ..... | No. |

MISCELLANEOUS—ERIE COUNTY.

| | | | | |
|---|---|---|---|---|
| No; about $9 less, ..... | 10 | Yes, ..... | 1 week, ..... | Yes. |
| ..... | 8 | No, ..... | 2 months, ..... | No. |
| The same as a man in this fact'y, | 10 | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 124 | U. S., ..... | Parents, ..... | $2 00 | * | Weekly,..... | One, .... |
| 125 | U. S., ..... | Strangers, ..... | 3 00 | * | Weekly,..... | One, .... |
| 126 | U. S., ..... | Keeping house, .... | ..... | * | Weekly,..... | One, .... |
| 127 | U. S., ..... | Parents, ..... | 2 00 | * | Weekly,..... | One, .... |
| 128 | U. S., ..... | Parents, ..... | ..... | $4 50 | Weekly,..... | ..... |
| 129 | U. S., ..... | Parents, ..... | ..... | 2 50 | Weekly,..... | One, .... |
| 130 | U. S., ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | One, .... |
| 131 | U. S., ..... | Parents, ..... | ..... | 4 00 | Weekly,..... | Two, ... |
| 132 | U. S., ..... | Parents, ..... | ..... | 2 50 | Weekly,..... | One, .... |
| 133 | U. S., ..... | Parents, ..... | ..... | 2 50 | Weekly,..... | One, .... |
| 134 | U. S., ..... | Parents, ..... | ..... | 2 50 | Weekly,..... | One, .... |
| 135 | U. S., ..... | Parents, ..... | ..... | 2 50 | Weekly,..... | One, .... |
| 136 | U. S., ..... | Parents, ..... | ..... | 2 50 | Weekly,..... | One, .... |
| 137 | U. S., ..... | Parents, ..... | ..... | 2 50 | Weekly,..... | One, .... |
| 138 | U. S., ..... | Parents, ..... | ..... | 2 50 | Weekly,..... | One, .... |
| 139 | U. S., ..... | Relatives, ..... | ..... | 2 50 | Weekly,..... | One, .... |
| 140 | U. S., ..... | Relatives, ..... | ..... | 2 50 | Weekly,..... | One, .... |
| 141 | U. S., ..... | Strangers, ..... | 2 00 | 3 00 | Weekly,..... | One, .... |
| 142 | U. S., ..... | Parents, ..... | ..... | 6 00 | Weekly,..... | Several,. |
| 143 | U. S., ..... | Parents, ..... | ..... | 6 00 | Weekly,..... | Three, .. |
| 144 | U. S., ..... | Strangers, ..... | 1 00 | 9 00 | Weekly,..... | Two, ... |
| 145 | U. S., ..... | Parents, ..... | ..... | 7 50 | Weekly,..... | One, .... |
| 146 | U. S., ..... | Parents, ..... | ..... | 7 50 | Weekly,..... | One, .... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 61 | U. S., ..... | Parents, ..... | $2 00 | $5 00 | Weekly,..... | One, .... |
| 62 | U. S., ..... | Parents, ..... | 2 00 | 5 00 | Weekly,..... | Two, ... |
| 63 | U. S., ..... | Parents, ..... | ..... | 5 00 | Weekly,..... | Two, ... |
| 64 | U. S., ..... | Keeping house, .... | ..... | 6 00 | Weekly,..... | Several,. |
| 65 | Germany, ..... | Parents, ..... | ..... | 3 00 | Weekly,..... | One, .... |
| 66 | U. S., ..... | Strangers, ..... | 1 00 | 5 00 | Weekly,..... | Two, ... |
| 67 | U. S., ..... | Parents, ..... | ..... | 4 00 | Weekly,..... | One, .... |
| 68 | U. S., ..... | Parents, ..... | 2 50 | 5 50 | Weekly,..... | One, .... |
| 69 | U. S., ..... | Sister, ..... | 2 00 | 4 00 | Weekly,..... | Three, .. |

* Piece work.

MISCELLANEOUS—ERIE COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No; $3 less, | 10 | No, | No, | |
| The same as a man in this factory, | 10 | No, | No, | |
| No; $3 less, | 10 | No, | No, | |
| No; $3 less, | 10 | No, | No, | |
| | 10 | No, | 2 weeks, | No. |
| | 10 | No, | 2 weeks. | |
| | 10 | No, | 2 weeks, | No. |
| | 10 | No, | 2 weeks, | No. |
| | 10 | No, | 2 weeks, | No. |
| | 10 | No, | 2 weeks, | No. |
| | 10 | No, | 2 weeks, | No. |
| | 10 | No, | 2 weeks, | No. |
| | 10 | No, | 2 weeks, | No. |
| | 10 | No, | 2 weeks, | No. |
| | 10 | No, | 2 weeks, | No. |
| | 10 | No, | 2 weeks, | No. |
| | 10 | No, | 2 weeks, | No. |
| | 10 | No, | 2 weeks, | No. |
| | 8 | No, | Optional, | No. |
| | 9 | No, | No, | |
| | 10 | No, | Optional, | No. |
| | 4 to 6 | No, | Yes, | No. |
| | 4 to 6 | No, | Yes, | No. |

LAUNDRY EMPLOYES—ERIE COUNTY.

| | | | | |
|---|---|---|---|---|
| About the same, | 10 | *Yes, | No, | |
| About the same, | 10 | *Yes, | No, | |
| Yes, | 6, 8 & 9 | *Yes, | No, | |
| Yes, | 5, 7 & 9 | *Yes, | No, | |
| Yes, | 5, 7 & 9 | *Yes | No, | |
| No; about $5 less, | 10 | *Yes, | 1 week, | No. |
| Yes, | 6, 8 & 9 | *Yes, | No, | |
| Yes, | | *Yes, | No, | |
| Yes, | 6, 8 & 9 | *Yes, | No, | |

* Paid for one or two day's sickness

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 70 | U. S., | Aunt, | $2 50 | $5 50 | Weekly, | Three, |
| 71 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | One, |
| 72 | U. S., | Parents, | | 5 50 | Weekly, | One, |
| 73 | U. S., | Strangers, | 2 50 | 6 50 | Weekly, | Two, |
| 74 | U. S., | Parents, | 4 00 | 7 50 | Weekly, | Three, |
| 75 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | Two, |
| 76 | U. S., | Parents, | | 4 00 | Weekly, | Two, |
| 77 | U. S., | Parents, | 2 50 | 4 75 | Weekly, | Two, |
| 78 | U. S., | Parents, | 2 00 | 5 50 | Weekly, | One, |
| 79 | Germany, | Parents, | 2 50 | 4 75 | Weekly, | Two, |
| 80 | U. S., | Parents, | | 2 75 | Weekly, | Two, |
| 81 | U. S., | Parents, | | 4 75 | Weekly, | Two, |
| 82 | U. S., | Parents, | 3 50 | 5 50 | Weekly, | Two, |
| 83 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 84 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 85 | U. S., | Parents, | 4 00 | 6 50 | Weekly, | Two, |
| 86 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 87 | U. S., | Parents, | 2 00 | 4 00 | Weekly, | Two, |
| 88 | U. S., | Parents, | 3 75 | 4 75 | Weekly, | Two, |
| 89 | U. S., | Parents, | | 4 75 | Weekly, | One, |
| 90 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | One, |
| 90¼ | U. S., | Parents, | 3 00 | 5 50 | Weekly, | One, |
| 90½ | U. S., | Strangers, | 2 50 | 6 00 | Weekly, | Four, |
| 90¾ | U. S., | Parents, | | 5 00 | Weekly, | Three, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | U. S., | Parents, | $3 75 | $6 00 | Weekly, | Two, |
| 2 | U. S., | Parents, | 4 00 | 5 00 | Weekly, | Two, |
| 3 | U. S., | Parents, | | 3 50 | Weekly, | Three, |
| 4 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 5 | U. S., | Parents, | | 6 00 | Weekly, | Two, |
| 6 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 7 | U. S., | Parents, | 5 00 | 6 00 | Weekly, | One, |
| 8 | U. S., | Sister, | 4 00 | 5 00 | Weekly, | Two, |
| 9 | U. S., | Parents, | | 2 50 | Weekly, | Two, |

LAUNDRY EMPLOYES—ERIE COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| Yes; same, | 9 & 5 | *Yes, | No, | |
| Yes; same, | 9 & 5 | *Yes, | No, | |
| Yes, | 3, 7 & 9 | *Yes, | No, | |
| Same, | 3, 7 & 9 | *Yes, | No, | |
| Yes, | 5, 7 & 9 | Yes, | No, | |
| Yes, | 6, 8 & 9 | *Yes, | No, | |
| Yes, | 5, 6 & 9 | *Yes, | No, | |
| Yes, | 5, 7 & 9 | *Yes, | No, | |
| Yes, | 5, 6 & 9 | *Yes, | No, | |
| Yes, | 5, 6 & 9 | *Yes, | No, | |
| Yes, | 5, 6 & 9 | *Yes. | No, | |
| | 5 & 9 | *Yes, | No, | |
| Yes, | 5, 6 & 9 | *Yes. | No, | |
| Yes, | 5, 7 & 9 | *Yes, | No, | |
| Yes, | 5, 7 & 9 | *Yes, | No, | |
| Yes, | 5, 6 & 9 | *Yes, | No, | |
| Yes, | 5, 7 & 9 | *Yes. | No, | |
| Yes, | 5, 7 & 9 | *Yes, | No, | |
| Yes, | 5, 7 & 9 | *Yes, | No, | |
| | 5, 7 & 9 | *Yes, | No, | |
| Yes, | 10½ | *Yes. | 1 week, | No. |
| Yes, | 5, 7 & 9 | *Yes, | No, | |
| | 8 to 12 | No, | No, | |
| | 10 to 12 | No, | No, | |

SALESWOMEN—LACKAWANNA COUNTY.

| | | | | |
|---|---|---|---|---|
| No, | 10 | No, | 2 weeks, | No. |
| No; $5 less, | 10 | No, | 10 days, | Yes. |
| No; less than one-half, | 9 | No, | No, | No. |
| No; $6 less per week, | 10 | No, | 2 weeks, | No. |
| | 10 | No | 2 weeks, | No. |
| No; $6 less per week, | 9 | No | 2 weeks, | No. |
| | 9 | No | 2 weeks, | Yes. |
| | 9 | No, | 10 days, | Yes. |
| No; ¾ less for the same work... | 10 | No, | 10 days, | Yes. |

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 10 | U. S., | Parents, | | $5 00 | Weekly, | Three, |
| 11 | U. S., | Sister, | $ 3 50 | 5 00 | Weekly, | Three, |
| 12 | England, | Parents, | | 3 00 | Weekly, | One, |
| 13 | U. S., | Parents, | | 3 00 | Weekly, | Three, |
| 14 | U. S., | Parents, | 3 00 | 5 50 | Weekly, | Three, |
| 15 | England, | Parents, | 3 50 | 6 00 | Weekly, | Two, |
| 16 | U. S., | Sister, | 2 00 | 8 00 | Weekly, | One, |
| 17 | U. S., | Parents, | 3 00 | 4 50 | Weekly, | Two, |
| 18 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 19 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 20 | U. S., | Parents, | 4 00 | 5 00 | Weekly, | One, |
| 21 | U. S., | Parents, | 2 00 | 7 00 | Weekly, | Two, |
| 22 | U. S., | Parents, | | 2 50 | Weekly, | One, |
| 23 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 24 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 25 | Wales, | Parents, | | 3 00 | Weekly, | Two, |
| 26 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 27 | U. S., | Parents, | | 6 00 | Weekly, | Three, |
| 28 | U. S., | Parents, | 2 00 | 7 00 | Weekly, | Three, |
| 29 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 30 | U. S., | Parents, | | 6 00 | Monthly, | Two, |
| 31 | U. S., | Parents, | 4 00 | 5 00 | Monthly, | One, |
| 32 | U. S., | Parents, | 2 50 | 3 00 | Weekly, | Two, |
| 33 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 34 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 35 | England, | Parents, | | 10 00 | Weekly, | One, |
| 36 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 37 | U. S., | Parents, | | 2 50 | Weekly, | Two, |
| 38 | U. S., | Parents, | | 2 50 | Weekly, | One, |
| 39 | U. S., | Parents, | | 2 50 | Weekly, | Two, |
| 40 | U. S., | Parents, | 4 00 | 6 00 | Weekly, | One, |
| 41 | Wales, | Relatives, | 2 00 | 2 50 | Weekly, | One, |
| 42 | U. S., | Relatives, | 3 00 | 8 00 | Weekly, | Three, |
| 43 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 44 | U. S., | Sister, | 2 50 | 3 00 | Weekly, | Two, |
| 45 | England, | Parents, | | 3 00 | Weekly, | One, |

SALESWOMEN—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No; not half, | 9 | No, | 10 days, | Yes. |
| No, | 9 | No. | 10 days, | Yes. |
| | 10 | No | 10 days, | Yes. |
| No; about $3 less, | 10 | No, | 10 days, | Yes. |
| | 10 | No, | 10 days, | Yes. |
| No; about $4 less per week, | 10 | No, | 10 days, | Yes. |
| $4 less for same work, | 10 | No | 10 days, | Yes. |
| | 9 | No. | 10 days, | Yes. |
| No, | 9 | No, | 10 days, | Yes. |
| No, | 10 | No, | 10 days, | Yes. |
| | 10 | No | 10 days, | Yes. |
| About $7 less, | 9 | No, | 10 days, | Yes. |
| About $5 less for same work, | 9 | No, | 2 weeks, | No. |
| No; less than one-half, | 10 | No, | 2 weeks, | Paid half. |
| Yes, | 9 | No, | 2 weeks, | No. |
| | 10 | No, | 2 weeks, | No. |
| $5 to $8 less, | 9 to 12 | Sometimes, | 2 weeks, | No. |
| | 6¼ | No, | 2 weeks, | Paid half. |
| | 9 | No, | No, | No. |
| | 9 | No, | 2 weeks, | No. |
| No, | 9 | No, | 1 week, | Yes. |
| No; $15 less, | 9 | Yes, | No, | |
| | 9 | No, | 2 weeks, | No. |
| No; about one-half, | 10½ | No, | 2 weeks, | No. |
| Less, | 9 | No, | 2 weeks, | No. |
| | 10 | No, | 2 months, | No. |
| No, | 10 | No, | 2 weeks, | No. |
| | 10 | No, | 2 weeks, | No. |
| Less, | 9 | No, | 2 weeks, | No. |
| No; $1.50 less, | 10 | No, | 2 weeks, | No. |
| No; very much less, | 10 | No, | 2 weeks, | Paid half. |
| No, | 10 | No, | 2 weeks, | No. |
| No; from $8 to $10 less, | 9 | No, | 2 weeks, | Paid half. |
| No; less, | 10 | No, | 2 weeks, | No. |
| About two-thirds less, | 9 | No, | 2 weeks, | No. |
| No; much less, | 10 | No, | 2 weeks, | Paid half. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 46 | U. S., | Parents, | | $12 00 | Weekly, | One, |
| 47 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 48 | Wales, | Parents, | | 6 00 | Semi-monthly, | Two, |
| 49 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 50 | U. S., | Parents, | $3 00 | 5 00 | Semi-monthly, | Two, |
| 51 | U. S., | Strangers, | 3 00 | 6 00 | Weekly, | Three, |
| 52 | U. S., | Parents, | | 3 00 | Semi-monthly, | Two, |
| 53 | U. S., | Parents, | | 2 50 | Weekly, | One, |
| 54 | U. S., | Parents, | 2 40 | 3 00 | Weekly, | Two, |
| 55 | U. S., | Sister, | | 2 50 | Weekly, | Two, |
| 56 | U. S., | Parents, | | 2 50 | Weekly, | One, |
| 57 | U. S., | Parents, | | 2 50 | Weekly, | One, |
| 58 | U. S., | Sister, | 3 00 | 5 50 | Weekly, | Two, |
| 59 | U. S., | Guardian, | 2 50 | 4 50 | Weekly, | Two, |
| 60 | U. S., | Parents, | 5 00 | 9 00 | Weekly, | Two, |
| 61 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 62 | U. S., | Parents, | 2 50 | 5 00 | Weekly, | Two, |
| 63 | U. S., | Parents, | 5 00 | 6 00 | Weekly, | Four, |
| 64 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 65 | U. S., | Parents, | | 3 00 | Weekly, | Three, |
| 66 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | Two, |
| 67 | U. S., | Parents, | | 2 50 | Weekly, | Two, |
| 68 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 69 | U. S., | Parents, | | 4 75 | Weekly, | One, |
| 70 | U. S., | Parents, | | 2 50 | Weekly, | One, |
| 71 | U. S., | Parents, | | 2 50 | Weekly, | One, |
| 72 | U. S., | Parents, | | 3 50 | Weekly, | Three, |
| 73 | U. S., | Parents, | 2 00 | 2 50 | Weekly, | Three, |
| 74 | U. S., | Parents, | 2 50 | 2 50 | Weekly, | One, |
| 75 | U. S., | Parents, | | 2 50 | Weekly, | One, |
| 76 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 77 | U. S., | Parents, | | 2 50 | Weekly, | Three, |
| 78 | U. S., | Parents, | | 4 00 | Weekly, | Three, |
| 79 | U. S., | Parents, | 2 90 | 3 50 | Weekly, | One, |
| 80 | U. S., | Parents, | | 3 50 | Weekly, | One, |

SALESWOMEN—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work. If less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9 | No, ..... | 4 months, ..... | No. |
| No; about one-half, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| No, ..... | 10 | Yes, ..... | 1 week, ..... | Yes. |
| ..... | 10 | Yes, ..... | 1 week, ..... | Yes. |
| No, ..... | 10 | Yes, ..... | 1 week, ..... | Yes. |
| About $6 less, ..... | 9 | No, ..... | 1 week, ..... | No. |
| ..... | 11 | ..... | ..... | ..... |
| ..... | 12 | Yes, ..... | No, ..... | ..... |
| Less, ..... | 9½ | No, ..... | 1 week, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| Less, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| No, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10½ | No, ..... | 2 weeks, ..... | No. |
| ..... | 10½ | No, ..... | 2 weeks, ..... | No. |
| No, ..... | 10½ | No, ..... | As long as desired, | No. |
| No; about one-half less, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| No; about one-half less, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| No; perhaps one-half less, ... | 10 | No, ..... | 2 weeks, ..... | Pd. 1 week. |
| ..... | 9 | No, ..... | 2 weeks, ..... | Pd. 1 week. |
| No; $8 or $9 less, ..... | 9 | No, ..... | 2 weeks, ..... | Pd. 1 week. |
| ..... | 10½ | No, ..... | 2 weeks, ..... | No. |
| No; $2.50 less, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| No, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10½ | No, ..... | 2 weeks, ..... | No. |
| No; $1.50 less, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| No, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| No; about $12 less, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| No, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10½ | Yes, ..... | 1 week, ..... | No. |
| ..... | 10½ | No, ..... | 1 week, ..... | No. |
| ..... | 10½ | No, ..... | 1 week, ..... | No. |
| No; $10 less, ..... | 10 | No, ..... | 2 weeks, ..... | Pd. 1 week. |
| Less, ..... | 9½ | No, ..... | 1 week, ..... | No. |
| ..... | 10½ | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 81 | U. S., | Parents, | | $5 00 | Semi-monthly, | Two, |
| 82 | U. S., | Parents, | | 3 00 | Weekly, | Two, |
| 83 | U. S., | Strangers, | $5 00 | 20 00 | Weekly, | Three, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 91 | U. S., | Parents, | $3 00 | $7 50 | Weekly, | Five, |
| 92 | U. S., | Relatives, | | 3 00 | Weekly, | Seven, |
| 93 | U. S., | Parents, | 2 00 | 4 00 | Weekly, | Two, |
| 94 | U. S., | Parents, | | 3 50 | Weekly, | Two, |
| 95 | U. S., | Parents, | | 1 50 | Weekly, | One, |
| 96 | U. S., | Parents, | 4 00 | 5 00 | Monthly, | Four, |
| 97 | U. S., | Parents, | | 3 00 | Semi-monthly, | One, |
| 98 | U. S., | Parents, | 1 50 | 4 50 | Weekly, | One, |
| 102 | Scotland, | Parents, | | 5 00 | Weekly, | One, |
| 104 | U. S., | Parents, | | | Weekly, | Three, |
| 105 | U. S., | Parents, | | 4 00 | Weekly, | Two, |
| 106 | U. S., | Parents, | | 8 75 | Monthly, | Two, |
| 107 | U. S., | Parents, | | 3 50 | Semi-monthly, | Two, |
| 111 | U. S., | Parents, | | 10 00 | Weekly, | One, |
| 112 | U. S., | Parents, | 3 00 | 4 50 | Weekly, | Three, |
| 113 | U. S., | Strangers, | 5 00 | 16 50 | Weekly, | Five, |
| 114 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 115 | U. S., | Keep house, | | 3 00 | Weekly, | One, |
| 116 | U. S., | Sister, | 2 00 | 4 00 | Weekly, | Two, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 121 | U. S., | Parents, | | $9 50 | Weekly, | One, |
| 122 | U. S., | Parents, | | 3 50 | Weekly, | One, |
| 123 | U. S., | Parents, | | 4 50 | Weekly, | Two, |
| 124 | U. S., | Parents, | | 2 37 | Semi-monthly, | One, |
| 125 | England, | Parents, | | 2 00 | Semi-monthly, | One, |
| 126 | U. S., | Parents, | $2 00 | 2 50 | Semi-monthly, | Two, |
| 127 | U. S., | Parents, | | 2 25 | Semi-monthly, | |

SALESWOMEN—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 11 | Yes, ..... | 1 week, ..... | Yes. |
| ..... | 10 | No, ..... | 2 weeks, ..... | Pd. 1 week. |
| ..... | 9 & 12 (s), | No, ..... | 4 weeks, ..... | No. |

MISCELLANEOUS—LACKAWANNA COUNTY.

| | | | | |
|---|---|---|---|---|
| No; at least $7.50 less, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| No; $4 or $5 less, ..... | 9 | No, ..... | 10 days, ..... | Yes. |
| No; $6 less at least, ..... | 10 | No, ..... | 10 days, ..... | Yes. |
| No, ..... | 10 | Half pay, .. | 2 weeks, ..... | No. |
| ..... | 9 | No, ..... | 2 months, ..... | No. |
| No; $5 less, ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 11 | Yes, ..... | 1 week, ..... | Yes. |
| ..... | 10½ | No, ..... | 2 weeks, ..... | No. |
| ..... | 9 | No, ..... .. | 1 week, ..... | No. |
| ..... | 9 | No, ..... | 10 days, ..... | Yes. |
| No, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| No, ..... | 9 | No, ..... | 1 week, ..... | Yes. |
| ..... | 11 | Yes, ..... | 1 week, ..... | Yes. |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | 2 weeks, ..... | Pd 1 week. |
| ..... | 9 | No, ..... | 2 months, ..... | No. |
| ..... | 9 | No, ..... | Dull season, ..... | No. |
| No, ..... | 9 | No, ..... | Dull season, ..... | No. |
| ..... | 9 | No, ..... | Dull season, ..... | No. |

CIGAR MAKERS, &c—LACKAWANNA COUNTY.

| | | | | |
|---|---|---|---|---|
| The same, ..... | 9 | No, ..... | When we want one, | No. |
| ..... | 9 | No, ..... | When we want one, | No. |
| ..... | 9 | No, ..... | 10 days, ..... | No. |
| ..... | 9½ | No, ..... | 2 to 6 weeks, ..... | No. |
| ..... | 9 | No, ..... | 2 to 3 weeks, ..... | No. |
| No, ..... | 10½ | No, ..... | No, ..... | No. |
| ..... | 9 | No, ..... | No, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 128 | Wales, | Parents, | | $5 00 | Semi-monthly, | One, |
| 129 | U. S., | Parents, | $5 00 | * | Semi-monthly, | One, |
| 130 | U. S., | Parents, | | 3 50 | Weekly, | One, |
| 131 | Wales, | Parents, | | 3 00 | Semi-monthly, | One, |
| 132 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 133 | England, | Parents, | | * | Semi-monthly, | One, |
| 134 | U. S., | Parents, | | 3 50 | Semi-monthly, | One, |
| 135 | U. S., | Parents, | | 3 00 | Semi-monthly, | One, |
| 136 | U. S., | Parents, | 2 50 | 4 00 | Weekly, | One, |
| 137 | U. S., | Parents, | 3 00 | 3 50 | Semi-monthly, | Two, |
| 138 | England, | Parents, | | 3 50 | Semi-monthly, | One, |
| 139 | U. S., | Parents, | 3 00 | 3 25 | Weekly, | Two, |
| 140 | Germany, | Parents, | | 2 37 | | One, |
| 141 | U. S., | Parents, | | 4 50 | Weekly, | Three, |
| 142 | Wales, | Parents, | | 2 50 | Semi-monthly, | One, |
| 143 | U. S., | Parents, | | 3 00 | Semi-monthly, | Three, |
| 144 | U. S., | Parents, | | 3 25 | Weekly, | Two, |
| 145 | U. S., | Parents, | | 5 40 | Semi-monthly, | One, |
| 146 | U. S., | Parents, | | 4 00 | Semi-monthly, | Two, |
| 147 | U. S., | Parents, | 2 50 | 3 25 | Weekly, | One, |
| 148 | U. S., | Parents, | | 3 25 | Weekly, | One, |
| 149 | U. S., | Parents, | | 3 62 | Weekly, | One, |
| 150 | England, | Parents, | | 3 87 | Weekly, | One, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 151 | U. S., | Parents, | | $4 00 | Monthly, | One, |
| 152 | U. S., | Parents, | | 3 50 | Monthly, | One, |
| 153 | U. S., | Parents, | | 3 50 | Monthly, | Two, |
| 154 | U. S., | Parents, | | 4 00 | Monthly, | One, |
| 155 | Ireland, | Strangers, | $2 00 | 3 50 | Monthly, | Two, |
| 156 | U. S., | Parents, | | 4 00 | Monthly, | One, |
| 157 | U. S., | Parents, | | 5 50 | Monthly, | One, |
| 158 | U. S., | Parents, | | 6 50 | Monthly, | One, |
| 159 | U. S., | Parents, | | 4 00 | Monthly, | One, |

* Piece work.

CIGARMAKERS, ETC—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| About the same, ..... | 9 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 6 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 10½ | No, ..... | 2 to 6 weeks, ..... | No. |
| ..... | 10½ | No, ..... | 2 weeks, ..... | No. |
| ..... | 9 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 9 | No, ..... | 4 to 6 weeks, ..... | No. |
| No; less, ..... | 8½ | No, ..... | ..... | No. |
| ..... | 10 | No, ..... | 6 weeks, ..... | No. |
| ..... | 9½ | No, ..... | 2 to 6 weeks, ..... | No. |
| ..... | 9 | No, ..... | 10 days, ..... | No. |
| Three-quaretrs less, ..... | 9 | No, ..... | 2 months, ..... | No. |
| One-third less, ..... | 8½ | No, ..... | ..... | No. |
| ..... | 10½ | No, ..... | 2 to 6 weeks, ..... | No. |
| ..... | 9½ | No, ..... | 3 to 4 weeks, ..... | No. |
| ..... | 9 | No, ..... | 10 days, ..... | No. |
| ..... | 9½ | No, ..... | 2 to 6 weeks, ..... | No. |
| ..... | 9½ | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |

KNITTING MILL EMPLOYES—LACKAWANNA COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | No, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10 | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 160 | U. S., | Parents, | | $4 50 | Monthly, | One, |
| 161 | U. S., | Parents, | | 4 00 | Monthly, | Two, |
| 162 | U. S., | Parents, | | 4 50 | Monthly, | One, |
| 163 | U. S., | Parents, | | 4 50 | Monthly, | One, |
| 164 | U. S., | Parents, | | 3 00 | Monthly, | Two, |
| 165 | U. S., | Guardian, | $1 25 | 3 00 | Monthly, | One, |
| 166 | U. S., | Parents, | | 3 25 | Monthly, | Two, |
| 167 | U. S., | Parents, | | 4 00 | Monthly, | One, |
| 168 | U. S., | Parents, | 3 00 | 6 00 | Monthly, | |
| 169 | U. S., | Parents, | 3 00 | 6 00 | Monthly, | One, |
| 170 | U. S., | Parents, | | 3 00 | Monthly, | One, |
| 171 | U. S., | Parents, | | 3 00 | Monthly, | One, |
| 172 | U. S., | Parents, | 2 50 | 5 00 | Monthly, | Two, |
| 173 | U. S., | Parents, | | 7 00 | Monthly, | One, |
| 174 | U. S., | Parents, | | 3 50 | Monthly, | One, |
| 175 | U. S., | Parents, | | 4 00 | Monthly, | Two, |
| 176 | U. S., | Parents, | | 3 50 | Monthly, | Three, |
| 177 | U. S., | Parents, | | 3 62 | Monthly, | Two, |
| 178 | U. S., | Parents, | | 6 00 | Monthly, | One, |
| 179 | U. S., | Parents, | | 4 00 | Monthly, | One, |
| 180 | U. S., | Parents, | | 4 25 | Monthly, | One, |
| 181 | U. S., | Parents, | | 4 50 | Monthly, | One, |
| 182 | Germany, | Parents, | | 4 00 | Monthly, | One, |
| 183 | Wales, | Parents, | | 3 00 | Monthly, | Two, |
| 184 | U. S., | Parents, | | 3 00 | Monthly, | One, |
| 185 | U. S., | Strangers, | 3 00 | 3 50 | Monthly, | Two, |
| 186 | Ireland, | Sister, | 2 50 | 3 25 | Monthly, | One, |
| 187 | U. S., | Parents, | | 3 25 | Monthly, | Two, |
| 188 | U. S., | Parents, | 2 50 | 3 25 | Monthly, | One, |
| 189 | U. S., | Sister, | 4 50 | 6 50 | Monthly, | One, |
| 190 | U. S., | Parents, | | 8 00 | Monthly, | One, |
| 191 | U. S., | Parents, | | 3 00 | Monthly, | One, |
| 192 | U. S., | Guardian, | | * | Monthly, | One, |
| 193 | U. S., | Parents, | 2 50 | 4 50 | Monthly, | One, |
| 194 | U. S., | Parents, | 3 50 | 4 50 | Monthly, | One, |

* Piece work.

KNITTING MILL EMPLOYES—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | No, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10 | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | No, ..... | No. |
| ..... | 10 | No, ..... | If necessary, ..... | No. |
| ..... | 10 | No, ..... | If necessary, ..... | No. |
| ..... | 8 | No, ..... | 1 month, ..... | No. |
| ..... | 10½ | No, ..... | No, ..... | No. |
| ..... | 10½ | No, ..... | No, ..... | No. |
| ..... | 10½ | No, ..... | 4 to 8 weeks, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | No, ..... | No. |
| ..... | 11 | No, ..... | No, ..... | No. |
| ..... | 10 | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | ..... | ..... |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | 1 to 2 months, .... | No. |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10½ | No, ..... | 2 months, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 195 | U. S., | Parents, | | $4 50 | Monthly, | Two, |
| 196 | U. S., | Parents, | | 4 00 | Monthly, | One, |
| 197 | U. S., | Parents, | | 4 50 | Monthly, | One, |
| 198 | Canada, | Keeping house, | | 5 00 | Monthly, | One, |
| 199 | U. S., | Parents, | | 6 00 | Monthly, | Two, |
| 200 | U. S., | Guardian, | $3 00 | 4 00 | Monthly, | One, |
| 201 | U. S., | Parents, | 2 50 | 4 00 | Monthly, | One, |
| 202 | U. S., | Parents, | | * | Monthly, | One, |
| 203 | Germany, | Parents, | | 4 00 | Monthly, | |
| 204 | England, | Parents, | | 2 50 | Monthly, | One, |
| 205 | U. S., | Parents, | | * | Monthly, | |
| 206 | U. S., | Parents, | | | Monthly, | One, |
| 207 | U. S., | Parents, | | 4 00 | Monthly, | |
| 208 | U. S., | Parents, | 2 50 | 4 00 | Monthly, | Two, |
| 209 | U. S., | Parents, | | 4 00 | Monthly, | Two, |
| 210 | U. S., | Parents, | 2 50 | 4 00 | Monthly, | Two, |
| 211 | Ireland, | Parents, | | 4 00 | Monthly, | Two, |
| 212 | U. S., | Parents, | | 3 00 | Monthly, | One, |
| 213 | U. S., | Parents, | 3 00 | 4 50 | Monthly, | One, |
| 214 | U. S., | Parents, | 3 00 | 4 50 | Monthly, | Two, |
| 215 | U. S., | Parents, | 3 00 | 4 50 | Monthly, | One, |
| 216 | U. S., | Parents, | | 2 25 | Semi-monthly, | Two, |
| 217 | U. S., | Parents, | | 2 25 | Semi-monthly, | Two, |
| 218 | U. S., | Parents, | | 2 25 | Semi-monthly, | Two, |
| 219 | U. S., | Parents, | 1 25 | 3 00 | Semi-monthly, | |
| 220 | U. S., | Parents, | | 4 00 | Semi-monthly, | One, |
| 221 | U. S., | Parents, | | 4 00 | Semi-monthly, | One, |
| 222 | U. S., | Parents, | | 5 00 | Semi-monthly, | |
| 223 | U. S., | Parents, | 3 00 | 4 00 | Semi-monthly, | One, |
| 224 | U. S., | Parents, | 2 50 | 3 00 | Semi-monthly, | One, |
| 225 | U. S., | Parents, | | 3 00 | Semi-monthly, | Two, |
| 226 | U. S., | Parents, | | 3 00 | Semi-monthly, | Two, |
| 227 | U. S., | Parents, | 2 50 | 3 50 | Semi-monthly, | One, |
| 228 | U. S., | Parents, | | 3 00 | Semi-monthly, | One, |
| 229 | U. S., | Parents, | | 4 00 | Semi-monthly, | One, |
| 230 | U. S., | Parents, | | 3 00 | Semi-monthly, | |

* Piece work.

KNITTING MILL EMPLOYES—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10½ | No, ..... | 1 to 3 months, ... | No. |
| ..... | 10½ | No, ..... | 1 to 2 months, .... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | 1 to 2 months, .... | No. |
| ..... | 10½ | No, ..... | If desired, ..... | No. |
| ..... | 10 | No, ..... | 1 month, ..... | No. |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10 | ..... | 2 months. | |
| ..... | 11 | No, ..... | No. | |
| ..... | 10 | No, ..... | ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10½ | No, ..... | 1 to 6 weeks, ..... | No. |
| ..... | 10½ | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | 1 month, ..... | No. |
| ..... | 10½ | No, ..... | If necessary, ..... | No. |
| ..... | ..... | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 9½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 231 | U. S., ..... | Parents, ..... | ..... | $3 50 | Semi-monthly, ..... | One, .... |
| 232 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Three, .. |
| 233 | Ireland, ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 234 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 235 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 236 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 237 | U. S., ..... | Parents, ..... | ..... | 4 50 | Semi-monthly, ..... | Two, ... |
| 238 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 239 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 240 | Ireland, ..... | Parents, ..... | $3 00 | 4 00 | Semi-monthly, ..... | ..... |
| 241 | Ireland, ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 242 | U. S., ..... | Parents, ..... | ..... | 4 00 | Semi-monthly, ..... | Two, ... |
| 243 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | ..... |
| 244 | Wales, ..... | Parents, ..... | 3 50 | 5 00 | Semi-monthly, ..... | One, .... |
| 245 | U. S., ..... | Parents, ..... | 4 00 | 5 00 | Semi-monthly, ..... | ..... |
| 246 | Ireland, ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 247 | U. S., ..... | Parents, ..... | ..... | 4 00 | Semi-monthly, ..... | One, .... |
| 248 | Ireland, ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 249 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 250 | Ireland, ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | One, .... |
| 251 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 252 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 253 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 254 | Ireland, ..... | Parents, ..... | 5 00 | 8 00 | Semi-monthly, ..... | One, .... |
| 255 | U. S., ..... | Parents, ..... | ..... | 4 00 | Semi-monthly, ..... | ..... |
| 256 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | ..... |
| 257 | U. S., ..... | Parents, ..... | ..... | 4 00 | Semi-monthly, ..... | One, .... |
| 258 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 259 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | ..... |
| 260 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | ..... |
| 261 | Wales, ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 262 | U. S., ..... | Keep house, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 263 | U. S., ..... | Parents, ..... | 2 50 | 3 00 | Semi-monthly, ..... | One, .... |
| 264 | U. S., ..... | Parents, ..... | 2 50 | 5 00 | Semi-monthly, ..... | One, .... |
| 265 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Three, .. |
| 266 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | Two, ... |

KNITTING MILL EMPLOYES—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | ..... | ..... | ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No. ..... | No, ..... | ..... |
| ..... | 9 | Yes, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No. ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No. ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 11 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 267 | U. S., ..... | Parents, ..... | ..... | $3 00 | Semi-monthly, ..... | One, .... |
| 268 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | ..... |
| 269 | U. S., ..... | Guardian, ..... | $2 50 | 3 50 | Semi-monthly, ..... | One, .... |
| 270 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | One, .... |
| 271 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | One, .... |
| 272 | U. S., ..... | Guardian, ..... | ..... | 5 00 | Semi-monthly, ..... | One, .... |
| 273 | U. S., ..... | Parents, ..... | 2 50 | 3 00 | Semi-monthly, ..... | Two, ... |
| 274 | U. S., ..... | Parents, ..... | 2 50 | 3 00 | Semi-monthly, ..... | One, .... |
| 275 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | .... ..... |
| 276 | U. S., ..... | Parents, ..... | 2 50 | 3 50 | Semi-monthly, ..... | Three, .. |
| 277 | U. S., ..... | Parents, ..... | 2 50 | 3 00 | Semi-monthly, ..... | ..... |
| 278 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 279 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 280 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 281 | U. S., ..... | Parents, ..... | 2 50 | 3 00 | Semi-monthly, ..... | Two, ... |
| 282 | U. S., ..... | Parents, ..... | 3 00 | 4 00 | Semi-monthly, ..... | ..... |
| 283 | Ireland, ..... | Parents, ..... | 3 00 | 5 00 | Semi-monthly, ..... | One, .... |
| 284 | U. S., ..... | Parents, ..... | 2 50 | 4 00 | Semi-monthly, ..... | One, .... |
| 285 | U. S., ..... | Parents, ..... | ..... | 4 50 | Semi-monthly, ..... | One, .... |
| 286 | U. S., ..... | Parents, ..... | ..... | 4 00 | Semi-monthly, ..... | ..... |
| 287 | U. S., ..... | Parents, ..... | ..... | 3 75 | Semi-monthly, ..... | One, .... |
| 288 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | Semi-monthly, ..... | Three, .. |
| 289 | U. S., ..... | Parents, ..... | ..... | 3 50 | Monthly, ..... | One, .... |
| 290 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 291 | U. S., ..... | Parents, ..... | 2 50 | 4 00 | Monthly, ..... | Two, ... |
| 292 | U. S., ..... | Parents, ..... | ..... | 4 00 | Monthly, ..... | Two, ... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 301 | U. S., ..... | Parents, ..... | ..... | $2 50 | Semi-monthly, ..... | One, .... |
| 302 | England, ..... | Parents, ..... | ..... | 3 14 | Semi-monthly, ..... | ..... |
| 303 | Ireland, ..... | Parents, ..... | ..... | 2 50 | Weekly, ..... | Two, ... |
| 304 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 305 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | Two, ... |
| 306 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 307 | U. S., ..... | Guardian, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |

KNITTING MILL EMPLOYES—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | ..... | ..... |
| ..... | 9 | No, ..... | ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | ..... | ..... |
| ..... | ..... | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | As long as desired, | No. |
| ..... | 10½ | No, ..... | Sometimes, ..... | No. |
| ..... | 10 | No, ..... | Sometimes, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |

SILK MILL OPERATIVES—LACKAWANNA COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 10½ | No, ..... | Sometimes, ..... | No. |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| No; a man doing the same work would receive twice as much,.. | 10½ | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 308 | U. S., ..... | Guardian, ..... | ..... | $2 00 | Semi-monthly, ..... | One, .... |
| 309 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 310 | U. S., ..... | Parents, ..... | ..... | 2 75 | Semi-monthly, ..... | Two, ... |
| 311 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 312 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 313 | U. S., ..... | Parents, ..... | ..... | 2 25 | Semi-monthly, ..... | Four, ... |
| 314 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | Two, ... |
| 315 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 316 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 317 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 318 | U. S., ..... | Sister, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 319 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 320 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Three, .. |
| 321 | England, ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 322 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 323 | U. S., ..... | Parents, ..... | ..... | 3 00 | Weekly, ..... | Three, .. |
| 324 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 325 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | ..... |
| 326 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 327 | Wales, ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | Two, ... |
| 328 | U. S., ..... | Parents, ..... | ..... | 2 75 | Semi-monthly, ..... | Two, ... |
| 329 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 330 | Germany, ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 331 | U. S., ..... | Parents, ..... | ..... | 2 50 | Weekly, ..... | One, .... |
| 332 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | ..... |
| 333 | U. S., ..... | Parents, ..... | ..... | 2 75 | Semi-monthly, ..... | Two, ... |
| 334 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | Two, ... |
| 335 | U. S., ..... | Parents, ..... | ..... | 2 75 | Semi-monthly, ..... | Two, ... |
| 336 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | Two, ... |
| 337 | U. S., ..... | Parents, ..... | $2 50 | 3 25 | Semi-monthly, ..... | One, .... |
| 338 | U. S., ..... | Parents, ..... | ..... | 2 25 | Semi-monthly, ..... | One, .... |
| 339 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 340 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Three, .. |
| 341 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | ..... |
| 342 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | Three, .. |
| 343 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | Semi-monthly, ..... | One, .... |

SILK MILL OPERATIVES—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| The same, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | *No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |

* Not unless injured at work.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 344 | U. S., ..... | Parents, ..... | ..... | $3 25 | Semi-monthly, ..... | One, .... |
| 345 | U. S., ..... | Parents, ..... | $2 25 | 3 00 | Semi-monthly, ..... | One, .... |
| 346 | U. S., ..... | Parents, ..... | ..... | 2 75 | Semi-monthly, ..... | Two, ... |
| 347 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 348 | Germany, ..... | Parents, ..... | ..... | 2 25 | Semi-monthly, ..... | One, .... |
| 349 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 350 | U. S., ..... | Parents, ..... | ..... | 2 75 | Semi-monthly, ..... | Two, ... |
| 351 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 352 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 353 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 354 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 355 | U. S., ..... | Parents, ..... | ..... | 2 75 | Semi-monthly, ..... | One, .... |
| 356 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 357 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 358 | England, ..... | Grand-parents, ..... | 2 00 | 2 50 | Semi-monthly, ..... | One, .... |
| 359 | England, ..... | Grand-parents, ..... | 2 00 | 2 75 | Semi-monthly, ..... | One, .... |
| 360 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | Five, ... |
| 361 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 362 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 363 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 364 | U. S., ..... | Parents, ..... | ..... | 2 25 | Semi-monthly, ..... | One, .... |
| 365 | Wales, ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 366 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 367 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | Two, ... |
| 368 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | Two, ... |
| 369 | U. S., ..... | Parents, ..... | ..... | 3 75 | Semi-monthly, ..... | One, .... |
| 370 | U. S., ..... | Parents, ..... | ..... | 5 50 | Semi-monthly, ..... | Two, ... |
| 371 | U. S., ..... | Parents, ..... | ..... | 5 50 | Semi-monthly, ..... | One, .... |
| 372 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 373 | U. S., ..... | Parents, ..... | 2 50 | 4 00 | Semi-monthly, ..... | One, .... |
| 374 | U. S., ..... | Parents, ..... | ..... | 6 00 | Semi-monthly, ..... | Three, .. |
| 375 | U. S., ..... | Parents, ..... | ..... | 3 75 | Semi-monthly, ..... | Two, ... |
| 376 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 377 | U. S., ..... | Guardian, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 378 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 379 | Wales, ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |

SILK MILL EMPLOYES—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| One-half less, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | ..... | No, ..... | 3 weeks, ..... | No. |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | On application, ... | No. |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 1 week, ..... | No. |
| Less; more than half, ..... | 10½ | No, ..... | On application, ... | No. |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 1 week, ..... | No. |
| ..... | 10 | No, ..... | 1 week, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 380 | U. S., ..... | Parents, ..... | ..... | $3 25 | Semi-monthly, ..... | One, .... |
| 381 | U. S., ..... | Parents, ..... | ..... | 4 00 | Semi-monthly, ..... | Two, ... |
| 382 | U. S., ..... | Parents, ..... | ..... | 5 50 | Semi-monthly, ..... | ..... |
| 383 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | Two, ... |
| 384 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | Two, ... |
| 385 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | Two, ... |
| 386 | U. S., ..... | Parents, ..... | ..... | 5 50 | Semi-monthly, ..... | One, .... |
| 387 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | One, .... |
| 388 | U. S., ..... | Parents, ..... | ..... | 4 50 | Semi-monthly, ..... | ..... |
| 389 | U. S., ..... | Sisters, ..... | ..... | 4 50 | Semi-monthly, ..... | One, .... |
| 390 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | One, .... |
| 391 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | ..... |
| 392 | U. S., ..... | Parents, ..... | ..... | 4 50 | Semi-monthly, ..... | Two, ... |
| 393 | U. S., ..... | Strangers, ..... | $2 00 | 5 25 | Semi-monthly, ..... | One, .... |
| 394 | U. S., ..... | Parents, ..... | ..... | 5 25 | Semi-monthly, ..... | One, .... |
| 395 | U. S., ..... | Parents, ..... | ..... | 4 50 | Semi-monthly, ..... | Two, ... |
| 396 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | Four, ... |
| 397 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | ..... |
| 398 | U. S., ..... | Parents, ..... | ..... | 4 25 | Semi-monthly, ..... | Three, .. |
| 399 | U. S., ..... | Parents, ..... | ..... | 3 75 | Semi-monthly, ..... | ..... |
| 400 | U. S., ..... | Parents, ..... | ..... | 4 25 | Semi-monthly, ..... | ..... |
| 401 | England, ..... | Parents, ..... | ..... | 3 75 | Semi-monthly, ..... | Two, ... |
| 402 | U. S., ..... | Parents, ..... | ..... | 3 75 | Semi-monthly, ..... | One, .... |
| 403 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | Three, .. |
| 404 | Wales, ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 405 | Ireland, ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | Four, ... |
| 406 | U. S., ..... | Parents, ..... | ..... | 3 75 | Semi-monthly, ..... | Two, ... |
| 407 | U. S., ..... | Parents, ..... | ..... | 4 00 | Semi-monthly, ..... | Two, ... |
| 408 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | One, .... |
| 409 | U. S., ..... | Parents, ..... | ..... | 10 00 | Semi-monthly, ..... | One, .... |
| 410 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | One, .... |
| 411 | U. S., ..... | Parents, ..... | ..... | 4 00 | Semi-monthly, ..... | Two, ... |
| 412 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | One, .... |
| 413 | Germany, ..... | Parents, ..... | ..... | 4 50 | Semi-monthly, ..... | Two, ... |
| 414 | U. S., ..... | Parents, ..... | ..... | 7 00 | Semi-monthly, ..... | Two, ... |
| 415 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly, ..... | Two, ... |

SILK MILL EMPLOYES—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | 1 week, ..... | No. |
| ..... | 10 | No, ..... | 1 or 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | On application, ... | No. |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | On application, ... | No. |
| ..... | 10 | No, ..... | On application, ... | No. |
| ..... | 10 | No, ..... | On application, ... | No. |
| ..... | 10 | No, ..... | On application, ... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | On application, ... | No. |
| ..... | 10 | No, ..... | On application, ... | No. |
| ..... | 10½ | No, ..... | As long as I wish,. | No. |
| ..... | 10½ | No, ..... | As long as I wish,. | No. |
| ..... | 10½ | No, ..... | 1 or 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | As long as I wish,. | No. |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | Yes, ..... | No. |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | Not unless nec'ry,. | No. |
| ..... | 10½ | No, ..... | When required, ... | No. |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | ..... | If desired, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | On application, ... | No. |
| ..... | 10 | No, ..... | On application, ... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 416 | U. S., | Parents, | | $5 25 | Semi-monthly, | One, |
| 417 | U. S., | Parents, | | 5 50 | Semi-monthly, | Three, |
| 418 | U. S., | Parents, | | 5 00 | Semi-monthly, | Two, |
| 419 | U. S., | Parents, | | 6 00 | Semi-monthly, | Two, |
| 420 | Ireland, | Parents, | | 4 50 | Semi-monthly, | One, |
| 421 | U. S., | Sister, | $2 00 | 3 50 | Semi-monthly, | One, |
| 422 | U. S., | Parents, | | 3 75 | Semi-monthly, | One, |
| 423 | U. S., | Parents, | | 5 00 | Semi-monthly, | Two, |
| 424 | U. S., | Parents, | | 3 75 | Semi-monthly, | One, |
| 425 | U. S., | Parents, | | 4 00 | Semi-monthly, | One, |
| 426 | U. S., | Parents, | | 4 00 | Semi-monthly, | One, |
| 427 | U. S., | Parents, | | 3 75 | Semi-monthly, | One, |
| 428 | U. S., | Parents, | | 7 00 | Semi-monthly, | One, |
| 429 | U. S., | Sister, | 2 50 | 4 50 | Semi-monthly, | One, |
| 430 | Ireland, | Parents, | | 5 00 | Semi-monthly, | Four, |
| 431 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 432 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 433 | Wales, | Parents, | | 3 25 | Semi-monthly, | Two, |
| 434 | U. S., | Parents, | | 3 50 | Semi-monthly, | One, |
| 435 | U. S., | Parents, | | 4 50 | Semi-monthly, | One, |
| 436 | U. S., | Guardian, | 2 00 | 4 50 | Semi-monthly, | One, |
| 437 | U. S., | Parents, | | 4 00 | Semi-monthly, | One, |
| 438 | U. S., | Parents, | | 4 25 | Semi-monthly, | One, |
| 439 | U. S., | Parents, | | 3 75 | Semi-monthly, | One, |
| 440 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 441 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 442 | England, | Parents, | | 5 00 | Semi-monthly, | One, |
| 443 | U. S., | Parents, | | 5 00 | Semi-monthly, | One, |
| 444 | U. S., | Parents, | | 3 50 | Semi-monthly, | One, |
| 445 | U. S., | Parents, | | 3 50 | Semi-monthly, | Two, |
| 446 | Wales, | Parents, | | 3 50 | Semi-monthly, | Two, |
| 447 | U. S., | Parents, | | 3 50 | Semi-monthly, | One, |
| 448 | U. S., | Parents, | | 4 00 | Semi-monthly, | Two, |
| 449 | Ireland, | Parents, | 3 00 | 3 25 | Semi-monthly, | One, |
| 450 | Ireland, | Parents, | | 4 25 | Semi-monthly, | One, |
| 451 | U. S., | Parents, | | 4 00 | Semi-monthly, | One, |

SILK MILL EMPLOYES—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowe for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | On application, ... | No. |
| ..... | 10 | No, ..... | On application, ... | No. |
| ..... | 10½ | No, ..... | On application, ... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 452 | England, ..... | Parents, ..... | ..... | $4 00 | Semi-monthly, ..... | ..... |
| 453 | U. S., ..... | Parents. ..... | ..... | 3 25 | Weekly, ..... | One, .... |
| 454 | U. S., ..... | Parents, ..... | ..... | 2 75 | Semi-monthly, ..... | Two, ... |
| 455 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 456 | U. S., ..... | Guardian, ..... | $2 00 | 3 25 | Semi-monthly, ..... | One, .... |
| 457 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 458 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 459 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 460 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | Two, ... |
| 461 | U. S., ..... | Parents, ..... | 2 50 | 3 25 | Semi-monthly, ..... | One, .... |
| 462 | U. S., ..... | Guardian, ..... | ..... | 2 75 | Weekly, ..... | One, .... |
| 463 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 464 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 465 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 466 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 467 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 468 | U. S., ..... | Parents, ..... | ..... | 2 75 | Semi-monthly, ..... | Two, ... |
| 469 | England, ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 470 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 471 | U. S. ,..... | Guardian, ..... | 2 25 | 3 25 | Semi-monthly, ..... | One, .... |
| 472 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 473 | U. S., ..... | Parents, ..... | ..... | 2 75 | Semi-monthly, ..... | Three, .. |
| 474 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 475 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 476 | England, ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 477 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 478 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 479 | U. S., ..... | Parents, ..... | ..... | 3 25 | Weekly, ..... | One, .... |
| 480 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | Three, .. |
| 481 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, . .. |
| 482 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 483 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 484 | England, ..... | Parents, ..... | ..... | 2 30 | Semi-monthly, ..... | ..... |
| 485 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 486 | Wales, ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 487 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | Two, ... |

SILK MILL EMPLOYES—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | Only when h't by mach. | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | Only when h't by mach. | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | Only when h't by mach. | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | Only when h't by mach. | No, ..... | ..... |
| ..... | 10½ | Only when h't by mach. | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 488 | Ireland, | Parents, | | $3 50 | Semi-monthly, | One, |
| 489 | U. S., | Parents, | | 2 00 | Semi-monthly, | |
| 490 | U. S., | Parents, | $2 50 | 3 25 | Semi-monthly, | One, |
| 491 | U. S., | Parents, | | 3 00 | Semi-monthly, | Three, |
| 492 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 493 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 494 | U. S., | Parents, | | 3 00 | Semi-monthly, | One, |
| 495 | Wales, | Parents, | | 3 25 | Semi-monthly, | One, |
| 496 | U. S., | Parents, | | 3 00 | Semi-monthly, | Three, |
| 497 | U. S., | Strangers, | 1 75 | 3 00 | Semi-monthly, | One, |
| 498 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 499 | U. S., | Parents, | | 3 00 | Semi-monthly, | One, |
| 500 | U. S., | Parents, | | 3 25 | Weekly, | One, |
| 501 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 502 | U. S., | Parents, | | 2 50 | Semi-monthly, | One, |
| 503 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 504 | U. S., | Parents, | | 3 50 | Semi-monthly, | One, |
| 505 | U. S., | Parents, | 1 75 | 3 25 | Semi-monthly, | One, |
| 506 | U. S., | Parents, | | 3 50 | Semi-monthly, | One, |
| 507 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 508 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 509 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 510 | U. S., | Parents, | | 2 50 | Semi-monthly, | One, |
| 511 | Ireland, | Parents, | | 3 00 | Semi-monthly, | One, |
| 512 | U. S., | Parents, | 2 00 | 3 00 | Semi-monthly, | One, |
| 513 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 514 | U. S., | Parents, | | 4 25 | Semi-monthly, | One, |
| 515 | U. S., | Parents, | | 2 50 | Semi-monthly, | One, |
| 516 | U. S., | Parents, | | 2 50 | Semi-monthly, | One, |
| 517 | England, | Parents, | | 2 50 | Semi-monthly, | One, |
| 518 | U. S., | Parents, | | 2 00 | Semi-monthly, | One, |
| 519 | U. S., | Parents, | | 2 25 | Semi-monthly, | One, |
| 520 | U. S., | Parents, | | 3 50 | Weekly, | One, |
| 521 | U. S., | Parents, | | 4 75 | Semi-monthly, | Four, |
| 522 | Wales, | Parents, | | 3 00 | Semi-monthly, | One, |
| 523 | U. S., | Parents, | 2 50 | 3 50 | Semi-monthly, | One, |

SILK MILL EMPLOYES—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | Only when h't by mach. | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | Only when h't by mach. | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | ..... | ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | Only when h't by mach. | No, ..... | ..... |
| ..... | 8 | Only when h't by mach. | No, ..... | ..... |
| ..... | 10½ | Only when h't by mach. | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 524 | U. S., ..... | Parents, ..... | ..... | $3 25 | Semi-monthly, ..... | One .... |
| 525 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 526 | U. S., ..... | Parents, ..... | $2 50 | 3 25 | Semi-monthly, ... .. | One, .... |
| 527 | Wales, ..... | Parents, ..... | 2 50 | 3 00 | Semi-monthly, ..... | Two, ... |
| 528 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 529 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 530 | U. S., ..... | Parents, ..... | 3 00 | 3 25 | Semi-monthly, ..... | One, .... |
| 531 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 532 | Germany, ..... | Parents, ..... | 2 00 | 2 50 | Semi-monthly, ..... | One, .... |
| 533 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, ... |
| 534 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 535 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 536 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | Three, .. |
| 537 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | Two, ... |
| 538 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 539 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, ... |
| 540 | Ireland, ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 541 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | Four, ... |
| 542 | Ireland, ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 543 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 544 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Three, .. |
| 545 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 546 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 547 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 548 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 549 | Germany, ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | Three, .. |
| 550 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Three, .. |
| 551 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 552 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 553 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Five, ... |
| 554 | U. S., ..... | Parents, ..... | 2 00 | 3 50 | Semi-monthly, ..... | Two, ... |
| 555 | U. S., ..... | Parents, ..... | 2 50 | 3 25 | Semi-monthly, ..... | One, .... |
| 556 | U. S., ..... | Parents, ..... | ..... | 3 25 | Weekly, ..... | One, .... |
| 557 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, ... |
| 558 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | ..... .... |
| 559 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One. . |

SILK MILL EMPLOYES—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | Only when h't by mach. | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 560 | U. S., | Parents, | | 3 25 | Semi-monthly, | Three, |
| 561 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 562 | U. S., | Parents, | | 3 25 | Weekly, | Two, |
| 563 | U. S., | Parents, | | 3 25 | Semi-monthly, | Two, |
| 564 | Ireland, | Parents, | | 3 25 | Semi-monthly, | One, |
| 565 | U. S., | Sister, | $2 25 | 3 50 | Semi-monthly, | One, |
| 566 | U. S., | Parents, | | 3 25 | Semi-monthly, | Six, |
| 567 | U. S., | Guardian, | | 3 25 | Semi-monthly, | |
| 568 | U. S., | Parents, | 2 50 | 3 50 | Semi-monthly, | Two, |
| 569 | U. S., | Friends, | | 3 25 | Semi-monthly, | Three, |
| 570 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 571 | U. S., | Parents, | | 3 25 | Weekly, | One, |
| 572 | Wales, | Parents, | | 3 00 | Semi-monthly, | Two, |
| 573 | U. S., | Parents, | | 3 25 | Semi-monthly, | Two, |
| 574 | U. S., | Parents, | | 3 00 | Semi-monthly, | One, |
| 575 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 576 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 577 | U. S., | Parents, | 3 00 | 3 25 | Semi-monthly, | One, |
| 578 | U. S., | Parents, | | 3 25 | Weekly, | Three, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 601 | U. S., | Parents, | | $4 50 | Weekly, | One, |
| 602 | U. S., | Parents, | | 4 50 | Weekly, | Two, |
| 603 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 604 | U. S., | Parents, | | 3 75 | Weekly, | |
| 605 | U. S., | Parents, | | 4 50 | Weekly, | One, |
| 606 | U. S., | Relatives, | | 3 25 | Weekly, | One, |
| 607 | U. S., | Parents, | | * | Weekly, | One, |
| 608 | U. S., | Relatives, | | 3 25 | Weekly, | One, |
| 609 | Ireland, | Parents, | | 3 50 | Weekly, | Two, |
| 610 | Ireland, | Parents, | | 5 00 | Weekly, | Two, |
| 611 | U. S., | Parents, | $4 00 | * | Weekly, | |
| 612 | U. S., | Parents, | | * | Weekly, | One, |

* Piece work.

## SILK MILL EMPLOYES—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | ..... | No, ..... | ..... |
| ..... | **10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |

## TOBACCO FACTORY EMPLOYES—LACKAWANNA COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 5 to 8 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | ..... | No, ..... | No, ..... | ..... |
| ..... | 9½ | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |

* There is nothing allowed for sickness among these mills, but employes injured by machinery are paid while they recover.

** Silk employes at Scranton work 60 hours a week: 10½ hours per day for 5 days, and Saturdays 7½ hours.

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 613 | U. S., ..... | Parents, ..... | ..... | $2 50 | Weekly,..... | One, .... |
| 614 | U. S., ..... | Parents, ..... | ..... | *..... | Weekly,..... | One, .... |
| 615 | U. S., ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | One, .... |
| 616 | U. S., ..... | Parents, ..... | $2 50 | 4 50 | Weekly,..... | One, ... |
| 617 | U. S., ..... | Parents, ..... | 2 00 | 4 50 | Weekly,..... | One, ... |
| 618 | U. S., ..... | Sister, ..... | 2 00 | 4 50 | Weekly,..... | Two, ... |
| 619 | U. S., ..... | Parents, ..... | ..... | 2 50 | Weekly,..... | One, .... |
| 620 | England, ..... | Parents, ..... | 2 00 | 4 50 | Weekly,..... | One, ... |
| 621 | Scotland, ..... | Sister, ..... | 2 00 | 4 50 | Weekly,..... | Two, ... |
| 622 | U. S., ..... | Parents, ..... | 2 50 | 3 62 | Weekly,..... | One, .... |
| 623 | U. S., ..... | Parents, ..... | ..... | 2 50 | Weekly,..... | One, .... |
| 624 | Ireland, ..... | Guardian, ..... | 2 00 | 3 25 | Weekly,..... | One, ... |
| 625 | U. S., ..... | Parents, ..... | ..... | 3 75 | Weekly,..... | One, .... |
| 626 | U. S., ..... | Parents, ..... | 3 00 | 3 50 | Weekly,..... | Two, ... |
| 627 | England, ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | One, ... |
| 628 | U. S., ..... | Parents, ..... | ..... | 3 62 | Weekly,..... | One, ... |
| 629 | England, ..... | Parents, ..... | ..... | 5 00 | Weekly,..... | One, .... |
| 630 | U. S., ..... | Parents, ..... | ..... | 4 50 | Weekly,..... | One, .... |
| 631 | U. S., ..... | Parents, ..... | 2 00 | 3 75 | Weekly,..... | One, .... |
| 632 | U. S., ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | One, .... |
| 633 | U. S., ..... | Parents, ..... | ..... | *..... | Weekly,..... | One, .... |
| 634 | Germany, ..... | Parents, ..... | ..... | 3 00 | Weekly,..... | One, .... |
| 635 | U. S. ,..... | Parents, ..... | ..... | 3 75 | Weekly,..... | One, .... |
| 636 | U. S., ..... | Parents, ..... | ..... | *..... | Weekly,..... | One, .... |
| 637 | U. S., ..... | Relatives, ..... | 1 50 | 4 00 | Weekly,..... | Two, ... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 661 | U. S., ..... | Parents, ..... | ..... | *..... | Monthly,..... | Three, . |
| 662 | Switzerland, ..... | Keep house, ..... | ..... | $4 50 | Monthly,..... | Three, .. |
| 663 | U. S., ..... | Parents, ..... | ..... | *..... | Monthly,..... | One, .... |
| 664 | U. S., ..... | Parents, ..... | ..... | *..... | Monthly,..... | One, .... |
| 665 | U. S., ..... | Parents, ..... | ..... | 4 50 | Monthly,..... | Two, ... |
| 666 | U .S., ..... | Parents, ..... | ..... | 4 50 | Monthly,..... | One, .... |
| 667 | U. S., ..... | Parents, ..... | ..... | 4 50 | Monthly,..... | One, .... |

* Piece work.

TOBACCO FACTORY EMPLOYES—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 5 to 8 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | 2 to 3 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 7 to 8 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |

BUTTER FACTORY EMPLOYES—LACKAWANNA COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 10 | No, ..... | If desired, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 668 | U. S., | Parents, | | $3 50 | Monthly, | One, |
| 669 | U. S., | Parents, | | 3 00 | Monthly, | One, |
| 670 | U. S., | Parents, | | 4 50 | Monthly, | Three, |
| 671 | U. S., | Parents, | | * | Monthly, | One, |
| 672 | U. S., | Parents, | | * | Monthly, | Two, |
| 673 | U. S., | Parents, | | * | Monthly, | Two, |
| 674 | Wales, | Relatives, | $2 00 | * | Monthly, | Two, |
| 675 | U. S., | Parents, | | 3 90 | Monthly, | One, |
| 676 | Germany, | Parents, | | * | Monthly, | Four, |
| 677 | U. S., | Parents, | | 3 00 | Monthly, | One, |
| 678 | Ireland, | Parents, | | * | Monthly, | Two, |
| 679 | U. S., | Parents, | | 3 00 | Monthly, | One, |
| 680 | U. S., | Parents, | | * | Monthly, | One, |
| 681 | U. S., | Guardian, | | * | Monthly, | One, |
| 682 | Ireland, | Parents, | | * | Monthly, | Two, |
| 683 | U. S., | Parents, | | * | Monthly, | One, |
| 684 | U. S., | Parents, | | * | Monthly, | One, |
| 685 | U. S., | Parents, | | * | Monthly, | Two, |
| 686 | U. S., | Keep house, | | * | Monthly, | One, |
| 687 | U. S., | Parents, | | * | Monthly, | One, |
| 688 | U. S., | Parents, | | 3 50 | Monthly, | One, |
| 689 | Germany, | Parents, | | 3 00 | Monthly, | One, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 691 | U. S., | Parents, | | $2 75 | Weekly, | Two, |
| 692 | Ireland, | Sister, | | 4 00 | Monthly, | One, |
| 693 | Ireland, | Sister, | $1 25 | 3 75 | Monthly, | One, |
| 694 | U. S., | Sister, | 1 25 | 3 75 | Monthly, | One, |
| 695 | U. S., | Strangers, | 2 25 | 6 00 | Monthly, | Two, |
| 696 | Wales, | Parents, | | 3 50 | Monthly, | Two, |
| 697 | U. S., | Parents, | | 3 25 | Monthly, | Three, |
| 698 | U. S., | Parents, | | 3 75 | Monthly, | Three, |
| 699 | U. S., | Parents, | | 3 75 | Monthly, | Three, |
| 700 | U. S., | Parents, | | 4 00 | Monthly, | Two, |

BUTTON FACTORY EMPLOYES—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | If desired, ..... | No. |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | If desired, ..... | No. |
| ..... | 8 | No, ..... | If desired, ..... | No. |
| ..... | 8 | No, ..... | If desired, ..... | No. |
| ..... | 8 | No, ..... | If desired, ..... | No. |
| ..... | 8 | No, ..... | If desired, ..... | No. |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 8 | No, ..... | If desired, ..... | No. |
| ..... | 8 | No, ..... | If desired, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |

MISCELLANEOUS—LACKAWANNA COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 10½ | No, ..... | No, ..... | ..... |
| ..... | 14 | Yes, ..... | 1 week, ..... | Yes. |
| ..... | 14 & 16 | Yes, ..... | 1 week, ..... | Yes. |
| ..... | 14 & 16 | Yes, ..... | 1 week, ..... | Yes. |
| ..... | 10 | No, ..... | 1 week, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 701 | U. S., ..... | Parents, ..... | ..... | $3 75 | Monthly,..... | One, .... |
| 702 | U. S., ..... | Parents, ..... | ..... | 3 50 | Monthly,..... | One, .... |
| 703 | U. S., ..... | Parents, ..... | ..... | 4 75 | Monthly,..... | Three, .. |
| 704 | U. S., ..... | Parents, ..... | ..... | 4 25 | Monthly,..... | Two, ... |
| 705 | Hungary, ..... | Parents, ..... | ..... | 2 50 | Semi-monthly,..... | Six, ..... |
| 706 | U. S., ..... | Grandparents, ..... | $3 00 | 4 00 | Monthly,..... | One, ... |
| 707 | U. S., ..... | Parents, ..... | ..... | 5 00 | Monthly,..... | Three, .. |
| 708 | England, ..... | Parents, ..... | 2 00 | 3 00 | Monthly,..... | Three, .. |
| 709 | U. S., ..... | Parents, ..... | 3 00 | 5 00 | Monthly,..... | One, ... |
| 710 | U. S., ..... | Parents, ..... | ..... | 5 00 | Semi-monthly,..... | One, .... |
| 711 | U. S., ..... | Parents, ..... | 2 50 | 3 50 | Monthly,..... | Two, ... |
| 712 | U. S., ..... | Parents, ..... | ..... | 3 50 | Monthly,..... | One, .... |
| 713 | U. S., ..... | Parents, ..... | ..... | 3 50 | Monthly,..... | One, .... |
| 714 | U. S., ..... | Parents, ..... | ..... | 5 00 | Monthly,..... | One, .... |
| 715 | U. S., ..... | Parents, ..... | ..... | 3 50 | Monthly,..... | One, .... |
| 716 | U. S., ..... | Strangers, ..... | ..... | 2 50 | Monthly,..... | Three, .. |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | U. S., ..... | Parents, ..... | ..... | $5 00 | Weekly,..... | Three, .. |
| 2 | U. S., ..... | Parents, ..... | $2 00 | 3 50 | Weekly,..... | Three, .. |
| 3 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | Weekly,..... | One, .... |
| 4 | U. S., ..... | Parents, ..... | 3 00 | 3 50 | Weekly,..... | One, ... |
| 5 | U. S., ..... | Parents, ..... | 2 00 | 2 50 | Weekly,..... | One, .... |
| 6 | U. S., ..... | Parents, ..... | ..... | 2 50 | Weekly,..... | One, .... |
| 7 | U. S., ..... | Parents, ..... | 1 00 | 2 00 | Weekly,..... | One, ... |
| 8 | U. S., ..... | Parents, ..... | ..... | 4 00 | Weekly,..... | One, .... |
| 9 | U. S., ..... | Parents, ..... | ..... | 4 00 | Weekly,..... | One, .... |
| 10 | U. S., ..... | Parents, ..... | 1 50 | 3 00 | Weekly,..... | One, ... |
| 11 | U. S., ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | One, .... |
| 12 | U. S., ..... | Parents, ..... | ..... | 2 00 | Weekly,..... | One, ... |
| 13 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | Weekly,..... | Two, ... |
| 14 | U. S., ..... | Strangers, ..... | 2 00 | 3 50 | Weekly,..... | One, .... |
| 15 | U. S., ..... | Parents, ..... | 1 50 | 3 50 | Weekly,..... | One, .... |
| 16 | U. S., ..... | Parents, ..... | ..... | 5 00 | Weekly,..... | One, .... |
| 17 | U. S., ..... | Parents, ..... | 2 50 | 4 00 | Weekly,..... | Two, ... |

MISCELLANEOUS—LACKAWANNA COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 1 week, ..... | No. |
| ..... | 8 | No, ..... | 1 week, ..... | No. |
| ..... | 8 | No, ..... | As long as desired, | No. |
| ..... | 10 | No, ..... | 1 week, ..... | No. |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 9½ | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 8 | No, ..... | No, ..... | ..... |

SHOE FACTORY OPERATIVES—DAUPHIN COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 3 or 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 3 or 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 18 | U. S., ..... | Relatives, ..... | $2 40 | $3 50 | Weekly,..... | Two, ... |
| 19 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | Weekly,..... | One, .... |
| 20 | U. S., ..... | Parents, ..... | 2 75 | 4 50 | Weekly,..... | One, .... |
| 21 | U. S., ..... | Aunt, ..... | ..... | 2 29 | Weekly,..... | ..... |
| 22 | U. S., ..... | Parents, ..... | 1 50 | 2 70 | Weekly,..... | One, .... |
| 23 | U. S., ..... | Parents, ..... | 2 50 | 3 53 | Weekly,..... | Two, ... |
| 24 | U. S., ..... | Parents, ..... | 4 00 | 6 50 | Weekly,..... | Two, ... |
| 25 | U. S., ..... | Parents, ..... | 2 00 | 4 00 | Weekly,..... | Three, .. |
| 26 | U. S., ..... | Parents, ..... | ..... | 4 00 | Weekly,..... | One, .... |
| 27 | U. S., ..... | Parents, ..... | ..... | 2 00 | ..... | One, .... |
| 28 | U. S., ..... | Strangers, ..... | 2 75 | 4 00 | Weekly,..... | One, .... |
| 29 | U. S., ..... | Parents, ..... | 2 50 | 4 50 | Weekly,..... | Two, ... |
| 30 | U. S., ..... | Parents, ..... | ..... | 4 00 | Weekly,..... | One, .... |
| 31 | U. S., ..... | Parent, ..... | 1 50 | 1 97 | Weekly,..... | One, .... |
| 32 | U. S., ..... | Strangers, ..... | 2 50 | 3 50 | Weekly,..... | Four, ... |
| 33 | Germany, ..... | Parents, ..... | 3 00 | 5 00 | Weekly,..... | Two, ... |
| 34 | U. S., ..... | Parents, ..... | 2 00 | 4 50 | Weekly,..... | One, .... |
| 35 | U. S., ..... | Relatives, ..... | 2 50 | 6 50 | Weekly,..... | Two, ... |
| 36 | U. S., ..... | Parents, ..... | 2 00 | 5 00 | Weekly,..... | One, .... |
| 37 | U. S., ..... | Parents, ..... | ..... | 4 00 | Weekly,..... | Two, ... |
| 38 | U. S., ..... | Parents, ..... | 2 50 | 4 50 | Weekly,..... | ..... |
| 39 | U. S., ..... | Sister, ..... | 2 00 | 3 00 | Weekly,..... | One, .... |
| 40 | U. S., ..... | Parents, ..... | ..... | 4 00 | Weekly,..... | One, ... |
| 41 | U. S., ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | Four, ... |
| 42 | U. S., ..... | Parents, ..... | ..... | 4 00 | Weekly,..... | One, .... |
| 43 | U. S., ..... | Parents, ..... | 2 00 | 3 50 | ..... | Two, .... |
| 44 | U. S., ..... | Parents, ..... | ..... | 4 00 | Weekly,..... | Two, ... |
| 45 | U. S., ..... | Parents, ..... | ..... | 5 50 | Weekly,..... | Two, ... |
| 46 | U. S., ..... | Parents, ..... | 2 00 | 4 00 | Weekly,..... | One, .... |
| 47 | U. S., ..... | Parents, ..... | ..... | 5 00 | Weekly,..... | One, .... |
| 48 | U. S., ..... | Parents, ..... | 2 00 | 4 00 | Weekly,..... | One, .... |
| 49 | U. S., ..... | Sister, ..... | 1 50 | 4 00 | Weekly,..... | Two, ... |
| 50 | U. S., ..... | Parents, ..... | ..... | 6 00 | Weekly,..... | One, ... |
| 51 | U. S., ..... | Parents, ..... | ..... | 5 00 | Weekly,..... | One, .... |
| 52 | U. S., ..... | Parents, ..... | 2 00 | 2 25 | Weekly,..... | Three. .. |

SHOE FACTORY OPERATIVES—DAUPHIN COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 1 month, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 53 | U. S., | Parents, | | $6 00 | Weekly, | One, |
| 54 | U. S., | Parents, | $2 25 | 4 00 | Weekly, | One, |
| 55 | U. S., | Parents, | 1 00 | 5 00 | Weekly, | One, |
| 56 | U. S., | Parents, | 3 50 | 4 00 | Weekly, | One, |
| 57 | U. S., | Parents, | | 4 00 | Weekly, | Three, |
| 58 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 59 | U. S., | Parents, | 1 50 | 2 21 | Weekly, | One, |
| 60 | U. S., | Relatives, | 1 35 | 2 70 | Weekly, | Two, |
| 61 | U. S., | Parents, | 1 47 | 1 97 | Weekly, | Two, |
| 62 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 63 | U. S., | Parents, | | 3 93 | Weekly, | One, |
| 64 | U. S., | Relatives, | 2 00 | 3 75 | Weekly, | Two, |
| 65 | U. S., | Parents, | | 3 00 | Weekly, | Two, |
| 66 | U. S., | Parents, | | * | Weekly, | One, |
| 67 | U. S., | Relatives, | 1 50 | 2 50 | Weekly, | One, |
| 68 | U. S., | Strangers, | 2 50 | 3 50 | Weekly, | Two, |
| 69 | U. S., | Parents, | | 2 50 | Weekly, | One, |
| 70 | U. S., | Relatives, | 2 50 | 4 50 | Weekly, | One, |
| 71 | U. S., | Parents, | 2 00 | 4 00 | Weekly, | Two, |
| 72 | U. S., | Parents, | 2 50 | 4 00 | Weekly, | Five, |
| 73 | U. S., | Parents, | 3 00 | 6 00 | Weekly, | One, |
| 74 | U. S., | Parents, | | 4 00 | Weekly, | Four, |
| 75 | U. S., | Parents, | | 4 50 | Weekly, | Three, |
| 76 | Austria, | Parents, | | 4 75 | Weekly, | One, |
| 77 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 78 | U. S., | Parents, | 1 00 | 3 50 | Weekly, | Three, |
| 79 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 80 | U. S., | Grand-parents, | 2 00 | 4 50 | Weekly, | One, |
| 81 | U. S., | Parents, | 2 00 | 8 00 | Weekly, | Two, |
| 82 | U. S., | Parents, | 1 50 | 2 21 | Weekly, | One, |
| 83 | U. S., | Parents, | 1 00 | 2 25 | Weekly, | One, |
| 84 | U. S., | Parents, | | 2 50 | Weekly, | One, |
| 85 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 86 | U. S., | Parents, | | 2 25 | Weekly, | Two, |
| 87 | U. S., | Parents, | 2 00 | 6 00 | Weekly, | One, |

* Beginner.

SHOE FACTORY OPERATIVES—DAUPHIN COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 6 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | No. | |
| ..... | 10 | No, ..... | 5 weeks, ..... | No. |
| ..... | 10 | No, ..... | 5 weeks, ..... | No. |
| ..... | 10 | No, ..... | No. | |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | ..... | ..... |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No. ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 3 weeks, ..... | No. |
| No; about $2 less, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 88 | U. S., | Parents, | | $3 93 | Weekly, | One, |
| 89 | U. S., | Parents, | $2 00 | 2 75 | Weekly, | One, |
| 90 | U. S., | Parents, | | 2 25 | Weekly, | Three, |
| 91 | U. S., | Parents, | 2 50 | 4 00 | Weekly, | One, |
| 92 | Russia, | Parents, | 2 00 | 3 25 | Weekly, | Four, |
| 93 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 94 | U. S., | Parents, | | 2 25 | Weekly, | One, |
| 95 | U. S., | Parents, | | 4 50 | Weekly, | Two, |
| 96 | U. S., | Strangers, | 2 00 | | Weekly, | Three, |
| 97 | U. S., | Sister, | 2 50 | 4 00 | Weekly, | Three, |
| 98 | U. S., | Parents, | | 3 93 | Weekly, | Two, |
| 99 | U. S., | Parents, | | 1 97 | Weekly, | One, |
| 100 | U. S., | Sister, | 1 50 | 3 00 | Weekly, | Two, |
| 101 | Germany, | Parents, | 1 50 | 4 00 | Weekly, | Two, |
| 102 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 103 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 104 | U. S., | Parents, | 2 00 | 5 50 | Weekly, | Two, |
| 105 | U. S., | Parents, | | 8 00 | Weekly, | Three, |
| 106 | Russia, | Parents, | 2 00 | 3 25 | Weekly, | Four, |
| 107 | U. S., | Parents, | 2 50 | 4 00 | Weekly, | Two, |
| 108 | Germany, | Parents, | 1 50 | 3 50 | Weekly, | One, |
| 109 | U. S., | Parents, | | 3 50 | Weekly, | Two, |
| 110 | U. S., | Parents, | 1 00 | 1 50 | Weekly, | Two, |
| 111 | U. S., | Parents, | | * | Weekly, | Two, |
| 112 | U. S., | Parents, | 2 50 | 5 00 | Weekly, | One, |
| 113 | U. S., | Parents, | 3 50 | 7 50 | Weekly, | Two, |
| 114 | U. S., | Strangers. | 2 50 | 4 00 | Weekly, | One, |
| 115 | U. S., | Relatives, | 2 50 | 4 50 | Weekly, | One, |
| 116 | U. S., | Parents, | 4 00 | 4 92 | Weekly, | |
| 117 | U. S., | Parents, | 2 00 | 3 50 | Weekly, | |
| 118 | U. S., | Strangers, | 3 00 | 5 00 | Weekly, | One, |
| 119 | U. S., | Parents, | 1 50 | 2 21 | Weekly, | One, |
| 120 | U. S., | Parents, | 1 00 | 1 48 | Weekly, | One, |
| 121 | U. S., | Parents, | 2 25 | 3 00 | Weekly, | Two, |
| 122 | U. S., | Parents, | | 3 00 | Weekly, | One, |

* A beginner.

SHOE FACTORY OPERATIVES—DAUPHIN COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| Yes, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| No; about $2.50 less, ..... | 10½ | No, ..... | 1 week, ..... | No. |
| Yes, ..... | 10 | No, ..... | 1 week, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | Unlimited, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | 2 or 3 weeks, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 123 | U. S., | Parents, | | $2 25 | Weekly, | Two, |
| 124 | U. S., | Parents, | | 1 75 | Weekly, | Two, |
| 125 | U. S., | Parents, | | * | Weekly, | One, |
| 126 | U. S., | Sister, | $2 00 | 5 00 | Weekly, | One, |
| 127 | U. S., | Parents, | | | Weekly, | Two, |
| 128 | U. S., | Parents, | | 2 70 | Weekly, | One, |
| 129 | U. S., | Strangers, | 1 75 | 4 75 | Weekly, | One, |
| 130 | U. S., | Parents, | 2 00 | 2 25 | Weekly, | Two, |
| 131 | U. S., | Parents, | 1 50 | 1 97 | Weekly, | Two, |
| 132 | U. S., | Parents, | 1 00 | 1 48 | Weekly, | One, |
| 133 | U. S., | Parents, | | 2 21 | Weekly, | Two, |
| 134 | U. S., | Relatives, | 1 50 | 1 97 | Weekly, | One, |
| 135 | U. S., | Parents, | 1 00 | 1 48 | Weekly, | One, |
| 136 | U. S., | Parents, | | 4 50 | Weekly, | Two, |
| 137 | U. S., | Parents, | 2 50 | 3 50 | Weekly, | |
| 138 | U. S., | Parents, | | 2 74 | Weekly, | Two, |
| 139 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 140 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 141 | U. S., | Parents, | | 1 72 | Weekly, | One, |
| 142 | U. S., | Parents, | | * | Weekly, | One, |
| 143 | U. S., | Parents, | 1 25 | 1 72 | Weekly, | Two, |
| 144 | U. S., | Parents, | | 1 72 | Weekly, | One, |
| 145 | U. S., | Parents, | 3 25 | 4 50 | Weekly, | One, |
| 146 | U. S., | Relatives, | 2 00 | 4 00 | Weekly, | Two, |
| 147 | U. S., | Parents, | 1 50 | 1 97 | Weekly, | One, |
| 148 | U. S., | Parents, | 1 00 | 2 75 | Weekly, | One, |
| 149 | U. S., | Parents, | 2 00 | 4 50 | Weekly, | Two, |
| 150 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 151 | U. S., | Parents, | 2 50 | 7 00 | Weekly, | Two, |
| 152 | U. S., | Parents, | 2 50 | 3 50 | Weekly, | One, |
| 153 | U. S., | Parents, | 2 50 | 3 25 | Weekly, | Several, |
| 154 | U. S., | Parents, | 2 25 | 4 00 | Weekly, | Two, |
| 155 | U. S., | Parents, | | 1 97 | Weekly, | One, |
| 156 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 157 | U. S., | Parents, | 1 50 | 3 50 | Weekly, | Two, |

* Beginner.

SHOE FACTORY OPERATIVES—DAUPHIN COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 3 weeks, ..... | No. |
| No, ..... | 10 | No, ..... | 3 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| Yes; same, ..... | 10 | No, ..... | 1 week, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| I think not, ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 158 | U. S., ..... | Parents, ..... | $1 75 | $1 97 | Weekly,..... | Two, . . |
| 159 | U. S,. ..... | Parents, ..... | 2 00 | 4 00 | Weekly,..... | One, .... |
| 160 | U. S., ..... | Parents, ..... | ..... | 2 21 | Weekly,..... | Two, ... |
| 161 | U. S., ..... | Parents, ..... | 2 50 | 4 50 | Weekly,..... | One, .... |
| 162 | U. S., ..... | Parents, ..... | 2 50 | 3 93 | Weekly,..... | Two, ... |
| 163 | U. S., ..... | Strangers, ..... | 2 00 | 3 75 | Weekly,..... | Three, .. |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 181 | U. S., ..... | Relatives, ..... | $2 50 | $4 75 | Semi-monthly, ..... | One, .... |
| 182 | U. S., ..... | Relatives, ..... | 3 00 | 4 00 | Semi-monthly, ..... | One, .... |
| 183 | U. S., ..... | Strangers, ..... | 2 50 | 4 00 | Semi-monthly, ..... | One, .... |
| 184 | U. S., ..... | Parents, ..... | 2 50 | 3 75 | Semi-monthly, ..... | One, .... |
| 185 | U. S., ..... | Parents, ..... | 2 50 | *..... | Semi-monthly, ..... | One, .... |
| 186 | U. S., ..... | Parents, ..... | ..... | 2 05 | Semi-monthly, ..... | One, .... |
| 187 | U. S., ..... | Parents, ..... | 2 00 | 3 80 | Semi-monthly, ..... | One, .... |
| 188 | U. S., ..... | Parents, ..... | 2 00 | 4 25 | Semi-monthly, ..... | One, .... |
| 189 | U. S., ..... | Parents, ..... | 2 00 | 3 67 | Semi-monthly, ..... | Three, .. |
| 190 | U. S., ..... | Parents, ..... | 2 00 | 4 50 | Semi-monthly, ..... | One, .... |
| 191 | U. S., ..... | Parents, ..... | 1 50 | 3 00 | Semi-monthly, ..... | One, .... |
| 192 | U. S., ..... | Parents, ..... | 2 00 | 2 75 | Semi-monthly, ..... | Two, .... |
| 193 | U. S., ..... | Parents, ..... | ..... | 3 67 | Semi-monthly, ..... | One, .... |
| 194 | U. S., ..... | Parents, ..... | ..... | *..... | Semi-monthly, ..... | Three, .. |
| 195 | U. S., ..... .. | Parents, ..... | 2 50 | 5 00 | Semi-monthly, ..... | One, . .. |
| 196 | U. S., ..... | House keeping, ..... | ..... | 5 00 | Semi-monthly, ..... | One, .... |
| 197 | U. S., ..... | Relatives, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 198 | U. S., ..... | Parents, ..... | 2 00 | 3 42 | Semi-monthly, ..... | Two, ... |
| 199 | U. S., ..... | Sister, ..... | 3 00 | 3 50 | Semi-monthly, ..... | One, .... |
| 200 | U. S., ..... | Parents, ..... | ..... | 5 00 | ..... | One, .... |
| 201 | U. S., ..... .. | Parents, ..... | 2 50 | *..... | Semi-monthly, ..... | One, .... |
| 202 | U. S., ..... | Strangers, ..... | 2 50 | 4 00 | Semi-monthly, ..... | Two, ... |
| 203 | U. S., ..... | Parents, ..... | 3 00 | *..... .. | Semi-monthly, ..... | One, .... |
| 204 | U. S., ..... | Parents, ..... | 2 00 | 4 00 | Semi-monthly, ..... | One, .... |
| 205 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .. . |
| 206 | U. S., ..... | Parents, ..... | 2 00 | 2 85 | Semi-monthly, ..... | One, .... |

* Piece work.

## SHOE FACTORY OPERATIVES—DAUPHIN COUNTY.

| Do you receive the same compensation as a man for the same class of work, If less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| Yes, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |

## SILK MILL OPERATIVES—DAUPHIN COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 10 & 5 (s), | No, ..... | As desired, ..... | No. |
| ..... | 10 & 5 (s), | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 & 5 (s), | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 & 5 (s), | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 & 5 (s), | No, ..... | On application, .... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 1 day, ..... | No. |
| ..... | 10 & 5 (s), | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 3 or 4 days, ..... | No. |
| Less, ..... | 10 | No, ..... | No, ..... | No. |
| ..... | 10 & 5 (s), | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| Less, ..... | 10 | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 207 | U. S., ..... | Parents, ..... | ..... | $2 47½ | Semi-monthly, ..... | One, .... |
| 208 | U. S., ..... | Parents, ..... | $2 00 | 4 00 | Semi-monthly, ..... | One, .... |
| 209 | U .S., ..... | Parents, ..... | ..... | 4 00 | Semi-monthly, ..... | Two, ... |
| 210 | U. S., ..... | Parents, ..... | 1 75 | 4 00 | Semi-monthly, ..... | Two, .. |
| 210½ | U. S., ..... | Parents, ..... | 2 00 | 2 85 | Semi-monthly, ..... | One, ... |
| 211 | U. S., ..... | Parents, ..... | 1 75 | 2 12 | Semi-monthly, ..... | One, .... |
| 212 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | Two, ... |
| 213 | U. S., ..... | Parents, ..... | 2 00 | 5 00 | Semi-monthly, ..... | Two, ... |
| 214 | U. S., ..... | Relatives, ..... | ..... | 3 30 | Semi-monthly, ..... | Two, ... |
| 215 | U. S., ..... | Parents, ..... | 1 75 | 4 00 | Semi-monthly, ..... | Three, .. |
| 216 | U. S., ..... | Parents, ..... | 1 75 | 4 00 | Semi-monthly, ..... | Three, .. |
| 217 | U. S., ..... | Parents, ..... | 2 50 | 3 30 | Semi-monthly, ..... | One, .... |
| 218 | U. S., ..... | Strangers, ..... | 2 50 | 7 00 | Weekly, ..... | Three, .. |
| 219 | U. S., ..... | House keeping, ..... | ..... | 4 50 | Semi-monthly, ..... | Five, ... |
| 220 | U. S., ..... | Parents, ..... | ..... | *..... | Semi-monthly, ..... | One, .... |
| 221 | U. S., ..... | Parents, ..... | 2 00 | 3 30 | Semi-monthly, ..... | Two, ... |
| 222 | U. S., ..... | Parents, ..... | ..... | *..... | Weekly, ..... | Two, ... |
| 223 | U. S., ..... | Parents, ..... | 2 00 | *..... | Semi-monthly, ..... | ..... |
| 224 | U. S., ..... | Relatives, ..... | 2 50 | 4 00 | Semi-monthly, ..... | Two, ... |
| 225 | U. S., ..... | Parents, ..... | 2 50 | 2 50 | Semi-monthly, ..... | One, .... |
| 226 | U. S., ..... | Parents, ..... | ..... | 2 75 | Semi-monthly, ..... | ..... |
| 227 | U. S., ..... | Parents, ..... | 2 00 | 2 75 | Semi-monthly, ..... | One, .... |
| 228 | U. S., ..... | Parents, ..... | 3 00 | 4 50 | Semi-monthly, ..... | Two, ... |
| 229 | U. S., ..... | Parents, ..... | 1 50 | *..... | Semi-monthly, ..... | Two, ... |
| 230 | U. S., ..... | Parents, ..... | 2 50 | 2 75 | Semi-monthly, ..... | One, .... |
| 231 | U. S., ..... | Parents, ..... | 2 50 | 3 00 | Semi-monthly, ..... | One, .... |
| 232 | U. S., ..... | Parents, ..... | 2 00 | 3 25 | Semi-monthly, ..... | One, .... |
| 233 | U. S., ..... | Parents, ..... | 1 50 | 3 00 | Semi-monthly, ..... | One, ... |
| 234 | U. S., ..... | Parents, ..... | 2 50 | 4 00 | Semi-monthly, ..... | One, ... |
| 235 | U. S., ..... | Grand-parents, ..... | 2 00 | 3 00 | Semi-monthly, ..... | One, .... |
| 236 | U. S., ..... | Strangers, ..... | 2 50 | *..... | ..... | Four, ... |
| 237 | U. S., ..... | Parents, ..... | 2 00 | *..... | Semi-monthly, ..... | Two, ... |
| 238 | U. S., ..... | Parents, ..... | 2 50 | *..... | Semi-monthly, ..... | One, .... |
| 239 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | Two, ... |
| 240 | U. S., ..... | Parents, ..... | 2 25 | 3 90 | Semi-monthly, ..... | Two, ... |

*Piece work.

SILK MILL OPERATIVES—DAUPHIN COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No; not half as much, | 10 | No, | No. | |
| | 10 | No, | No, | |
| | 10 & 5 (s), | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | 1 week, | No. |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | On application, | No. |
| | 10 | No, | No, | |
| No. | 10 | No, | 1 day, | No. |
| | 11 & 5 (s), | No, | No, | |
| | 10 & 5 (s), | No, | 2 weeks, | No. |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| No; a great deal less, | 10 | No, | No, | |
| | 10 & 5 (s), | No, | No, | |
| | 10 & 5 (s), | No, | 3 days, | No, |
| | 10 | No, | Sometimes, | No. |
| | 9 | No, | | |
| | 10 & 5 (s), | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| No, | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| No, | 10 | No, | No, | |
| | 10 | No, | No, | |
| No; one-half less, | 10 & 5 (s), | No, | No, | |
| | 10 & 5 (s), | No, | No, | |
| | 10 & 5 (s), | No, | No, | |
| | 10 & 5 (s), | No, | No, | |

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| | U. S., | Parents, | | $3 50 | Semi-monthly, | Two, |
| 240½ | U. S., | Parents, | | 5 50 | Monthly, | One, |
| 240¾ | U. S., | Strangers, | | 2 50 | Semi-monthly, | Two, |
| 271 | U. S., | Parents, | $2 50 | 4 50 | Semi-monthly, | One, |
| 272 | U. S., | Paernts, | 2 00 | 3 75 | Semi-monthly, | One, |
| 273 | U. S., | Parents, | 2 00 | 3 50 | Semi-monthly, | One, |
| 274 | U. S., | Parents, | 1 50 | 3 25 | Semi-monthly, | One, |
| 275 | U. S., | Parents, | 2 00 | * | Semi-monthly, | One, |
| 276 | U. S., | Parents, | 2 00 | 1 20 | Semi-monthly, | One, |
| 277 | U. S., | Brother, | 2 00 | 2 75 | Semi-monthly, | One, |
| 278 | U. S., | Strangers, | 2 50 | 3 75 | Semi-monthly, | One, |
| 279 | U. S., | Sister, | 2 00 | 2 75 | Semi-monthly, | One, |
| 280 | U. S., | Sister, | 2 00 | 3 67 | Semi-monthly, | One, |
| 281 | U. S., | Parents, | 2 00 | 3 50 | Semi-monthly, | One, |
| 282 | U. S., | Parents, | | 2 75 | Semi-monthly, | One, |
| 283 | U. S., | Parents, | 2 00 | 3 43 | Semi-monthly, | One, |
| 284 | U. S., | Parents, | | 4 50 | Semi-monthly, | One, |
| 285 | U. S., | Strangers, | 2 50 | 4 50 | Weekly, | Two, |
| 286 | U. S., | Strangers, | 2 00 | 3 68 | Semi-monthly, | One, |
| 287 | U. S., | Parents, | 2 50 | 4 00 | Semi-monthly, | One, |
| 288 | U. S., | Parents, | 2 50 | 4 50 | Semi-monthly, | One, |
| 289 | U. S., | Parents, | 1 20 | 1 50 | Semi-monthly, | One, |
| 290 | U. S., | Parents, | 1 50 | 1 80 | Semi-monthly, | One, |
| 291 | U. S., | Parents, | | 1 80 | Semi-monthly, | Two, |
| 292 | U. S., | Keep house, | 3 00 | 4 00 | Semi-monthly, | One, |
| 293 | U. S., | Mother, | 2 00 | 3 20 | Semi-monthly, | Six, |
| 294 | U. S., | Strangers, | 3 00 | 6 00 | Weekly, | One, |
| 295 | U. S., | Strangers, | 2 25 | 3 50 | Semi-monthly, | One, |
| 296 | U. S., | Strangers, | 2 50 | 4 50 | Semi-monthly, | Two, |
| 297 | U. S., | Grand-parents, | 1 75 | 2 00 | Semi-monthly, | One, |
| 298 | U. S., | Sister, | 2 20 | 3 40 | Semi-monthly, | One, |
| 299 | U. S., | Parents, | | 1 50 | Semi-monthly, | Two, |

*Piece work.

SILK MILL OPERATIVES—DAUPHIN COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 & 5 (s), | No, ..... | No, ..... | ..... |
| ..... | 10 & 5 (s), | No, ..... | No, ..... | ..... |
| ..... | 12 | Yes, ..... | 1 month, ..... | Yes. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| No, ..... | 10 | No, ..... | No, ..... | ..... |
| No, ..... | 10 | No, ..... | No, ..... | ..... |
| One-half less, ..... | 10 | No, ..... | No, ..... | ..... |
| Yes, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 1 week, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| No ,..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 & 5 (s), | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| No, ..... | 10 | No, ..... | No, ..... | ..... |
| Same, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | Yes, one week ,.... | No. |
| ..... | 10 | No, ..... | Yes, one week ,.... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| No, ..... | 10 | No, ..... | No, ..... | ..... |
| No, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 241 | U. S., | Parents, | $2 50 | $3 00 | Weekly, | One, |
| 242 | U. S., | Parents, | 2 50 | 3 00 | Weekly, | One, |
| 243 | U. S., | Relatives, | 2 50 | 5 00 | Weekly, | One, |
| 244 | U. S., | Parents, | 1 00 | 2 50 | Weekly, | Two, |
| 245 | U. S., | Strangers, | 2 50 | 5 00 | Weekly, | One, |
| 246 | U. S., | Parents, | 3 00 | 3 00 | Weekly, | Two, |
| 247 | U. S., | Parents, | 1 50 | 2 50 | Weekly, | Two, |
| 248 | U. S., | Parents, | 1 50 | 3 00 | Weekly, | Two, |
| 249 | U. S., | Parents, | | 3 00 | Weekly, | Two, |
| 250 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 251 | U. S., | Parents, | | 5 00 | Weekly, | Several, |
| 252 | U. S., | Parents, | | 2 50 | Weekly, | One, |
| 253 | U. S., | Parents, | 1 00 | 2 50 | Weekly, | One, |
| 254 | U. S., | Parents, | 1 50 | 2 50 | Weekly, | One, |
| 255 | U. S., | Parents, | | | Weekly, | Three, |
| 256 | U. S., | Parents, | 2 00 | 5 00 | Weekly, | One, |
| 257 | U. S., | Mother, | | 4 00 | Weekly, | One, |
| 258 | U. S., | Strangers, | 4 00 | 9 00 | Weekly, | Three, |
| 259 | U. S., | Strangers, | 3 50 | 8 00 | Weekly, | Four, |
| 260 | U. S., | Parents, | 2 00 | 3 00 | Weekly, | Two, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 571 | U. S., | Parents, | | $3 00 | Semi-monthly, | Three, |
| 572 | U. S., | Parents, | $3 00 | 5 00 | Semi-monthly, | One, |
| 573 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 574 | U. S., | Parents, | 2 00 | 2 50 | Semi-monthly, | Three, |
| 575 | U. S., | Parents, | 2 50 | 3 50 | Semi-monthly, | Three, |
| 576 | U. S., | Strangers, | 2 50 | 4 25 | Semi-monthly, | One, |
| 577 | U. S., | Parents, | | 4 50 | Semi-monthly, | Seven, |
| 578 | U. S., | Parents, | 2 00 | 3 25 | Semi-monthly, | Four, |
| 579 | U. S., | Parents, | | 3 25 | Semi-monthly, | Two, |
| 580 | U. S., | Parents, | | 3 50 | Semi-monthly, | Four, |
| 581 | U. S., | Parents, | | 3 00 | Weekly, | Two, |
| 582 | U. S., | Strangers, | 1 50 | 3 50 | Weekly, | Two, |

## SALESWOMEN—DAUPHIN COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9½ | Yes, .... | 1 week, ..... | Yes. |
| ..... | 9½ | Yes, ..... | 1 week, ..... | Yes. |
| No; from $2.50 to $3.50 less, ..... | 10 | No, ..... | 4 weeks, ..... | Paid 1 week. |
| No, ..... | 9 | No, ..... | 2 weeks, ..... | Paid 1 week. |
| No, ..... | 10 & 15 (s), | Yes, ..... | 2 weeks, ..... | Paid 1 week. |
| No; seven-tenths less, ..... | 10 | Yes, ..... | 2 weeks, ..... | Paid 1 week. |
| Less, ..... | 10 | Yes, ..... | 2 weeks, ..... | Paid 1 week. |
| Less, ..... | 10 | Yes, ..... | 2 weeks, ..... | Paid 1 week. |
| No; $4 less, ..... | 11 | No, ..... | 2 weeks, ..... | Paid 1 week. |
| ..... | 10 | Yes, ..... | 2 weeks, ..... | Paid 1 week. |
| ..... | 10 & 14 (s), | *No, ..... | 2 weeks, ..... | Paid 1 week. |
| No, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| No; about three-fourths less, .... | 10 & 14 (s), | *Yes, ..... | 2 weeks, ..... | Paid 1 week. |
| No; about three-fourths less, .... | 10 | Yes, ..... | 2 weeks, ..... | Paid 1 week. |
| ..... | 10 & 14 (s), | Sometimes, . | 2 months, ..... | No. |
| About one-third less, ..... | 9 & 14 (s), | Sometimes, . | 2 weeks, ..... | Yes, 1 week. |
| No, ..... | 9½ | Sometimes, . | 2 weeks, ..... | Yes, 1 week. |
| No, ..... | 9 & 14 (s), | Yes, ..... | 2 weeks, ..... | Yes, 1 week. |
| No; about one-third less, ..... | 9 & 14 (s), | Yes, ..... | 2 to 6 weeks, ..... | No. |
| ..... | 10 | Yes, ..... | Various, ..... | No. |

## MISCELLANEOUS—LYCOMING COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| No; two-thirds less, ..... | 10 | No, ..... | No, ..... | ..... |
| No; one-third less, ..... | 10 | No, ..... | No, ..... | ..... |
| No; two-thirds less, ..... | 10 | No, ..... | No, ..... | ..... |
| Yes; the same, ..... | 10 | No, ..... | No, ..... | ..... |
| No; about 50 cents less, ..... | 10 | No, ..... | No, ..... | ..... |
| No; two-thirds less, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 & 8 (s), | No, ..... | No, ..... | ..... |
| ..... | 10 & 8 (s), | No, ..... | No, ..... | ..... |
| ..... | 8 to 12 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | Yes, ..... | No. |

* Paid if only sick one or two days

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 583 | U. S., ..... | Strangers, ..... | $2 80 | $6 00 | Weekly,..... | Two, ... |
| 584 | U. S., ..... | Strangers, ..... | 2 50 | 5 40 | Weekly,..... | One, .... |
| 585 | U. S., ..... | Parents, ..... | ..... | 3 90 | Weekly,..... | One, .... |
| 586 | U. S., ..... | Parents, ..... | ..... | 6 75 | Weekly,..... | One, .... |
| 587 | U. S., ..... | Parents, ..... | 4 00 | 6 60 | Weekly,..... | ..... |
| 588 | U. S., ..... | Parents, ..... | ..... | 2 75 | Weekly,..... | Several,. |
| 589 | U. S., ..... | Parents, ..... | 2 50 | 2 50 | Weekly,..... | One, .... |
| 590 | U. S., ..... | Sister, ..... | 2 50 | 2 75 | Weekly,..... | Two, ... |
| 591 | U. S., ..... | Parents, ..... | ..... | 3 00 | Weekly,..... | One, .... |
| 592 | U. S., ..... | Parents, ..... | 3 00 | 5 00 | Weekly,..... | One, .... |
| 593 | U. S., ..... | Parents, ..... | 3 00 | 3 00 | Weekly,..... | ..... |
| 594 | U. S,. ..... | Parents, ..... | 2 50 | 3 00 | Weekly,..... | Two, ... |
| 595 | U. S., ..... | Parents, ..... | 2 50 | 3 00 | Weekly,..... | Two, ... |
| 596 | U. S., ..... | Parents, ..... | 2 50 | 3 36 | Semi-monthly, ..... | One, .... |
| 597 | England, ..... | Parents, ..... | 6 00 | 8 00 | Weekly,..... | Two, ... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 421 | U. S., ..... | Parents, ..... | $2 00 | $3 50 | Weekly,..... | Several. |
| 422 | U. S., ..... | Parents, ..... | 2 00 | 3 50 | Weekly,..... | One, .... |
| 423 | Germany, ..... | Keep house, ..... | ..... | 6 00 | Weekly,..... | One, .... |
| 424 | U. S., ..... | Keep house, ..... | ..... | 3 45 | Weekly,..... | Four, ... |
| 425 | U. S., ..... | Aunts, ..... | 2 50 | 3 45 | Weekly,..... | Three, .. |
| 426 | U. S., ..... | Parents, ..... | 2 50 | 3 50 | Weekly,..... | One, .... |
| 427 | U. S., ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | One, .... |
| 428 | U. S., ..... | Parents, ..... | ..... | 3 87 | Weekly,..... | Three, .. |
| 429 | U. S., ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | One, .... |
| 430 | U. S., ..... | Parents, ..... | 2 00 | 3 75 | Weekly,..... | Two, ... |
| 431 | U. S., ..... | Parents, ..... | ..... | 3 00 | Weekly,..... | Two, . . |
| 432 | U. S., ..... | Parents, ..... | 2 00 | 3 25 | Weekly,..... | One, . . . |
| 433 | U. S., ..... | Sister, ..... | 2 50 | 4 50 | Weekly,..... | Two, . . |
| 434 | U. S,. ..... | Parents, ..... | 2 00 | 6 00 | Weekly,..... | Three, .. |
| 435 | U. S., ..... | Parents, ..... | 2 50 | 5 00 | Weekly,..... | Two, ... |
| 436 | Germany, ..... | Parents, ..... | 2 00 | 3 50 | Weekly,..... | Three, .. |
| 437 | Germany, ..... | Parents, ..... | 3 50 | 4 75 | Weekly,..... | Two, ... |

MISCELLANEOUS—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 8 & 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 8 & 10 | No, ..... | No, ..... | ..... |
| ..... | 7 to 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 to 12 | No, ..... | No, ..... | ..... |
| No; $4.80 less per week, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| No, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | Yes, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | ..... | ..... | ..... |
| ..... | 10 | ..... | ..... | ..... |
| ..... | 10 | No, ..... | ..... | ..... |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |

STEAM LAUNDRY EMPLOYES—LYCOMING COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 10 to 13 | No, ..... | No, ..... | ..... |
| ..... | 10 to 13 | No, ..... | No, ..... | ..... |
| No; about $3.00 less, ..... | 11 | No, ..... | If desired, ..... | No. |
| ..... | 7, 10 & 13 | No, ..... | No, ..... | ..... |
| ..... | 7, 10 & 13 | No, ..... | No, ..... | ..... |
| No; about 50 cents less, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 & 12 | No, ..... | If desired, ..... | No. |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 10 & 12 | No, ..... | If desired, ..... | No. |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 10 & 12 | No, ..... | ..... | ..... |
| No, ..... | 8 | No, ..... | No, ..... | ..... |
| No; $3 less, ..... | 10 & 12 | No, ..... | If desired, ..... | No. |
| No; $6 less, ..... | 9 & 10 | No, ..... | No, ..... | ..... |
| ..... | 8 & 10 | No, ..... | No, ..... | ..... |
| ..... | 9 & 10 | No, ..... | If desired, ..... | No. |
| ..... | 9 & 10 | No, ..... | If desired, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 438 | U. S., | Parents, | | 4 25 | Weekly, | Two, |
| 439 | U. S., | Grand-parents, | | 2 00 | Weekly, | Two, |
| 440 | U. S., | Parents, | $2 00 | 3 75 | Weekly, | Three, |
| 441 | U. S., | Strangers, | 4 00 | 9 00 | Weekly, | Four, |
| 442 | U. S., | Parents, | | 3 50 | Weekly, | Two, |
| 443 | U. S., | Parents, | 2 00 | 3 75 | Weekly, | One, |
| 444 | U. S., | Parents, | 2 00 | 4 00 | Weekly, | Two, |
| 445 | U. S., | Parents, | 2 00 | 3 75 | Weekly, | One, |
| 446 | U. S., | Strangers, | 3 00 | 8 00 | Weekly, | Two, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 511 | U. S., | Parents, | $3 50 | $4 00 | Weekly, | One, |
| 512 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 513 | U. S., | Parents, | 3 00 | 5 50 | Weekly, | One, |
| 514 | U. S., | Parents, | 3 00 | * | Owe five weeks, | One, |
| 515 | U. S., | Parents, | 3 00 | * | No regular pay day, | One, |
| 516 | U. S., | Parents, | | * | Weekly, | One, |
| 517 | U. S., | Parents, | 3 00 | 3 50 | Weekly, | Two, |
| 518 | U. S., | Parents, | 3 00 | 3 50 | Weekly, | Two, |
| 519 | U. S., | Strangers, | | * | Weekly, | One, |
| 520 | U. S., | Parents, | 3 00 | 5 50 | Weekly, | One, |
| 521 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 522 | U. S., | Grand-parents, | | 5 00 | Weekly, | One, |
| 523 | U. S., | Parents, | 3 00 | 3 50 | Pay when they feel like it, | One, |
| 524 | U. S., | Parents, | | 5 00 | Pay when they feel like it, | Two, |
| 525 | U. S., | Grand-parents, | 3 00 | 5 50 | Weekly, | Two, |
| 526 | U. S., | Parents, | | 4 00 | Weekly, | Two, |
| 527 | U. S., | Sister, | | * | Weekly, | Two, |
| 528 | U. S., | Parents, | | 3 50 | Weekly, | One, |
| 529 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 530 | U. S., | Sister, | | * | Weekly, | Two, |
| 531 | U. S., | Sister, | 2 00 | 4 00 | Weekly, | Two, |

*Piece work.

STEAM LAUNDRY EMPLOYES—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 & 12 | No, ..... | No, ..... | ..... |
| ..... | 10 & 12 | No, ..... | No, ..... | ..... |
| ..... | 9 & 10 | No, ..... | No, ..... | ..... |
| ..... | 9½ & 11 | Yes, ..... | No, ..... | ..... |
| ..... | 8 to 12 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 9 & 10 | No, ..... | If desired. ..... | No. |
| ..... | 9 & 10 | No, ..... | If desired, ..... | No. |
| No; from $4 to $7 less, ..... | 10 to 13 | No, ..... | No. | |

KINDLING MILL EMPLOYES—LYCOMING COUNTY.

| | | | | |
|---|---|---|---|---|
| The same, ..... | 10 | No, ..... | Holidays, ..... | No. |
| The same, ..... | 10 | No, ..... | No, ..... | ..... |
| Yes, ..... | 10 | No, ..... | No, ..... | ..... |
| Yes, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | Sometimes, ..... | No. |
| The same, ..... | 9 | No, ..... | No, ..... | ..... |
| The same, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| The same, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| The same, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| The same, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 12 | No, ..... | No, ..... | ..... |
| ..... | 12 | No, ..... | No, ..... | ..... |
| The same, ..... | 10 | No, ..... | No, ..... | ..... |
| The same, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| The same, ..... | 9 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| The same, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| Yes, ..... | 10 | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 451 | U. S., | Parents, | $2 00 | $4 00 | Weekly, | One, |
| 452 | U. S., | Parents, | | 3 75 | Weekly, | One, |
| 453 | U. S., | Parents, | | 1 62 | Weekly, | One, |
| 454 | U. S., | Parents, | | 2 75 | Weekly, | One, |
| 455 | U. S., | Parents, | | 1 25 | Weekly, | One, |
| 456 | U. S., | Parents, | | 1 50 | Weekly, | One, |
| 457 | U. S., | Parents, | 2 00 | *2 75 | Weekly, | One, |
| 458 | U. S., | Parents, | 2 00 | 4 00 | Weekly, | One, |
| 459 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | One, |
| 460 | U. S., | Parents, | 1 00 | 4 00 | Weekly, | Three, |
| 461 | U. S., | Parents, | | 5 50 | Weekly, | One, |
| 462 | U. S., | Parents, | | 3 25 | Semi-monthly, | Three, |
| 463 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 464 | U. S., | Parents, | 2 00 | 4 00 | Weekly, | One, |
| 465 | U. S., | Parents, | | 3 50 | Weekly, | Three, |
| 466 | U. S., | Parents, | 2 00 | 4 00 | Weekly, | Three, |
| 467 | U. S., | Parents, | | 1 50 | Semi-monthly, | Three, |
| 468 | U. S., | Parents, | | 2 75 | Semi-monthly, | Four, |
| 469 | U. S., | Parents, | | 3 25 | Semi-monthly, | One, |
| 470 | U. S., | Parents, | | 3 25 | Semi-monthly, | Two, |
| 471 | U. S., | Parents, | | 2 75 | Semi-monthly, | Three, |
| 472 | U. S., | Parents, | | 2 75 | Semi-monthly, | Two, |
| 473 | Ireland, | Sister, | 2 00 | 4 50 | Semi-monthly, | One, |
| 474 | U. S., | Parents, | | 2 25 | Semi-monthly, | One, |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | U. S., | Parents, | 1 75 | 2 50 | Semi-monthly, | Two, |
| 2 | U. S., | Parents, | | 3 25 | Weekly, | One, |
| 3 | U. S., | Parents, | 2 50 | 3 25 | *. | Two, |
| 4 | U. S., | Parents, | | 3 00 | *. | Four, |
| 5 | U. S., | Relatives, | 3 00 | 4 50 | Semi-monthly, | One, |
| 6 | U. S., | Parents, | 2 50 | 3 50 | Weekly, | Two, |
| 7 | U. S., | Parents, | | 3 50 | Weekly. | One, |

*Piece work.
* Paid when each piece is done.

PAPER BOX FACTORY EMPLOYES—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, If less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | ..... | ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | If desired, ..... | No. |
| ..... | 6 & 10 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | If desired, ..... | No. |
| ..... | 8 | No, ..... | If desired, ..... | No. |
| ..... | 8 | No, ..... | If desired, ..... | No. |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | If desired, ..... | No. |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |

SILK MILL OPERATIVES—LYCOMING COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| No, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| No, ..... | 10 | No, ..... | No, ..... | ..... |
| No, ..... | 10 | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 8 | U. S., ..... | Parents, ..... | $3 00 | $4 00 | Weekly,..... | One, .... |
| 9 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 10 | U. S., ..... | Parents, ..... | 2 50 | 3 75 | Weekly,..... | One, ... |
| 11 | U. S., ..... | Relatives, ..... | 2 00 | 3 50 | Weekly,..... | One, .... |
| 12 | U. S., ..... | Parents, ..... | ..... | 5 00 | *..... | Two, ... |
| 13 | U. S., ..... | Parents, ..... | 2 50 | 4 50 | *..... | Two, ... |
| 14 | U. S., ..... .. | Parents, ..... | 2 50 | 3 50 | *..... | One, ... |
| 15 | U. S., ..... | Parents, ..... | 3 00 | 3 66 | Weekly,..... | One, .... |
| 16 | U. S., ..... | Parents, ..... | 2 00 | 3 50 | Weekly,..... | Two, ... |
| 17 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | Two, ... |
| 18 | U. S., ..... | Sister, ..... | 2 00 | 3 00 | Semi-monthly, ..... | ..... .... |
| 19 | U. S., ..... | Strangers, ..... | 3 50 | 4 50 | *..... | One, ... |
| 20 | U. S., ..... | Parents, ..... | 3 00 | 4 50 | Semi-monthly, ..... | Three, .. |
| 21 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | Two, ... |
| 22 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | One, .... |
| 23 | U. S., ..... | Sister, ..... | 2 00 | 3 00 | *..... | Four, ... |
| 24 | U. S., ..... | Parents, ..... | 2 50 | 3 75 | *..... | One, .... |
| 25 | U. S., ..... | Parents, ..... | 3 00 | 6 00 | Weekly,..... | Two, ... |
| 26 | U. S., ..... | Parents, ..... | 3 50 | 6 00 | Weekly,..... | One, .... |
| 27 | U. S., ..... | Parents, ..... | 2 00 | 2 62 | *..... | One, ... |
| 28 | U. S., ..... | Parents, ..... | 3 00 | 5 00 | Weekly,..... | Two, ... |
| 29 | Scotland, ..... | Strangers, ..... | 3 00 | 5 00 | Weekly,..... | Two, ... |
| 30 | U. S., ..... | Parents, ..... | 3 00 | 4 75 | Weekly,..... | One, .... |
| 31 | U. S., ..... | Parents, ..... | ..... | 3 50 | ..... | One, .... |
| 32 | U. S., ..... | Parents, ..... | 3 00 | 4 50 | *..... | One, .... |
| 33 | U. S., ..... | Relatives, ..... | ..... | 4 75 | ..... | One, .... |
| 34 | U. S., ..... | Parents, ..... | 2 50 | 3 25 | Weekly,..... | One, .... |
| 35 | U. S., ..... | Strangers, ..... | 3 50 | 7 50 | Weekly,..... | Two, . . |
| 36 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 37 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 38 | U. S., ..... | Parents, ..... | ..... | 9 00 | Semi-monthly, ..... | One, .... |
| 39 | U. S., ..... | Parents, ..... | 3 00 | 4 00 | Weekly,..... | One, .. . |
| 40 | U. S., ..... | Parents, ..... | 3 00 | 5 50 | Weekly,..... | One, .... |
| 41 | U. S., ..... | Parents, ..... | 3 00 | 6 00 | Weekly,..... | One, .... |
| 42 | U. S., ..... | Parents, ..... | ..... | 2 87 | *..... | Two, . . |
| 43 | U. S., ..... | Parents, ..... | 1 00 | 4 50 | Weekly,..... | One, .... |

* Paid by the piece whenever it is completed.

SILK MILL OPERATIVES—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No. ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No,

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 44 | U. S., ..... | Parents, ..... | ..... | ..... | Weekly,..... | Two, ... |
| 45 | U. S., ..... | Parents, ..... | $3 00 | 3 25 | ..... | Two, .... |
| 46 | U. S., ..... | Parents, ..... | 3 00 | 4 00 | *..... | One, .... |
| 47 | U. S., ..... | Sister, ..... | 1 50 | 3 75 | *..... | One, ... |
| 48 | U. S., ..... | Sister, ..... | 3 00 | 5 00 | Weekly,..... | One, .... |
| 49 | Ireland, ..... | Parents, ..... | 3 00 | 4 50 | *..... | One, .... |
| 50 | U. S., ..... | Parents, ..... | 2 00 | 3 50 | Weekly,..... | Two, . . |
| 51 | U. S., ..... | Parents, ..... | ..... | 3 25 | *..... | Two, . . |
| 52 | U. S., ..... | Strangers, ..... | 200 | 3 50 | Weekly,..... | One, .... |
| 53 | U. S., ..... | Parents, ..... | ..... | 2 95 | *..... | One, ... |
| 54 | U. S., ..... | Parents, ..... | ..... | 3 00 | *..... | One, .... |
| 55 | U. S., ..... | Sister, ..... | 2 00 | 5 50 | *..... | One, .... |
| 56 | U. S., ..... | Parents, ..... | 4 00 | 6 00 | Weekly,..... | One, .... |
| 57 | U. S., ..... | Parents, ..... | 3 00 | 3 50 | *..... | Two, ... |
| 58 | U. S., ..... | Parents, ..... | 3 00 | 4 50 | Weekly,..... | One, .... |
| 59 | U. S., ..... | Parents, ..... | 2 25 | 4 25 | *..... | One, . .. |
| 60 | U. S,. ..... | Parents, ..... | ..... | 3 65 | Weekly,..... | Two, ... |
| 61 | U. S., ..... | Parents, ..... | 3 00 | 6 00 | Weekly,..... | Two, ... |
| 62 | U. S., ..... | Parents, ..... | ..... | 3 00 | Weekly,..... | One, .... |
| 63 | Germany, ..... | Parents, ..... | 2 00 | 2 79 | Weekly,..... | One, .... |
| 64 | U. S., ..... | Sister, ..... | 1 50 | 4 50 | Semi-monthly,..... | Two, ... |
| 65 | Poland, ..... | Parents, ..... | 2 50 | 3 60 | Weekly,..... | One, .... |
| 66 | U. S., ..... | Strangers, ..... | 3 00 | 3 45 | Weekly,..... | One, .... |
| 67 | U. S., ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | One, .... |
| 68 | U. S., ..... | Parents, ..... | 2 50 | 4 50 | Weekly,..... | ..... |
| 69 | U. S., ..... .. | Parents, ..... | 3 50 | 4 50 | Weekly,..... | Two, ... |
| 70 | U. S., ..... .. | Parents, ..... | ..... | 4 50 | Weekly,..... | Two, ... |
| 71 | U. S., ..... | Parents, ..... | 3 00 | 4 00 | Weekly,..... | One, .... |
| 72 | U. S., ..... | Brother, ..... | 2 25 | 4 50 | Weekly,..... | One, .... |
| 73 | U. S., ..... | Parents, ..... | ..... | 4 50 | Weekly,..... | One, .... |
| 74 | U. S., ..... | Parents, ..... | 3 00 | 6 00 | Weekly,..... | Three, .. |
| 75 | U. S., ..... .. | Strangers, ..... | 2 00 | 4 00 | Weekly,..... | Two, ... |
| 76 | U. S., ..... | Strangers, ..... | 3 50 | 10 00 | Weekly,..... | One, .... |
| 77 | U. S., ..... | Sister, ..... | 2 00 | 3 00 | *..... | One, .... |
| 78 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | ..... | One, .... |

* Paid by the piece when done.

SILK MILL OPERATIVES—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | No, ..... | ..... |
| Less, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| Less, ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| Less, ..... | 10 | No, ..... | 1 day, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 2 days, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 79 | U. S., ..... | Parents, ..... | ..... | $3 00 | Weekly, ..... | One, .... |
| 80 | U. S., ..... | Parents, ..... | ..... | 3 00 | Weekly, ..... | Three, .. |
| 81 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 82 | U. S., ..... | Parents, ..... | ..... | 6 00 | Semi-monthly, ..... | One, .... |
| 83 | U. S., ..... | Parents, ..... | ..... | 2 00 | Semi-monthly, ..... | One, .... |
| 84 | U. S., ..... | Parents, ..... | $2 00 | 2 50 | Semi-monthly, ..... | Two, ... |
| 85 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | Two, ... |
| 86 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | Two, ... |
| 87 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | Two, ... |
| 88 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | Three, .. |
| 89 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 90 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 91 | U. S., ..... | Sister, ..... | 3 00 | 4 50 | Semi-monthly, ..... | One, .... |
| 92 | U. S., ..... | Parents, ..... | 3 00 | 5 50 | Semi-monthly, ..... | One, .... |
| 93 | U. S., ..... | Guardian, ..... | 2 50 | 4 50 | Semi-monthly, ..... | One, .... |
| 94 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | ..... |
| 95 | U. S., ..... | Strangers, ..... | 3 25 | 11 00 | Semi-monthly, ..... | One, .... |
| 96 | U. S., ..... | Brother, ..... | 2 50 | 3 50 | Semi-monthly, ..... | One, .... |
| 97 | U. S., ..... | Parents, ..... | 2 50 | 5 00 | Semi-monthly, ..... | One, .... |
| 98 | U. S., ..... | Parents, ..... | 4 00 | 6 00 | Semi-monthly, ..... | ..... |
| 99 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .... |
| 100 | U. S., ..... | Sister, ..... | 1 50 | 3 50 | Semi-monthly, ..... | One, .... |
| 101 | U. S., ..... | Sister, ..... | 1 75 | 4 50 | Semi-monthly, ..... | Two, ... |
| 102 | U. S., ..... | Sister, ..... | 3 00 | 5 00 | Semi-monthly, ..... | One, ... |
| 103 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, ... |
| 104 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | One, .. |
| 105 | U. S., ..... | Parents, ..... | 4 00 | 6 00 | Semi-monthly, ..... | Two, .. |
| 106 | U. S., ..... | Parents, ..... | ..... | 3 50 | Semi-monthly, ..... | Two, ... |
| 107 | U. S., ..... | Strangers, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 108 | U. S., ..... | Parents, ..... | 2 00 | 2 50 | Semi-monthly, ..... | One, .... |
| 109 | U. S., ..... | Parents, ..... | ..... | 4 50 | Semi-monthly, ..... | One, .... |
| 110 | U. S., ..... | Strangers, ..... | 3 00 | 4 50 | Semi-monthly, ..... | One, .... |
| 111 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, .... |
| 112 | U. S., ..... | Parents, ..... | ..... | 3 25 | Semi-monthly, ..... | Three, .. |
| 113 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | Two, ... |
| 114 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |

SILK MILL OPERATIVES—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 115 | U. S., ..... | Parents, ..... | $2 50 | $3 00 | Semi-monthly, ..... | One, .... |
| 116 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | Semi-monthly, ..... | One, ... |
| 117 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | One, .... |
| 118 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 119 | U. S., ..... | Parents, ..... | ..... | 9 00 | Semi-monthly, ..... | Two, ... |
| 120 | U. S., ..... | Parents, ..... | 2 50 | 3 00 | Semi-monthly, ..... | One, ... |
| 121 | U. S., ..... | Parents, ..... | 2 50 | 3 00 | Semi-monthly, ..... | One, .... |
| 122 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 123 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | One, ... |
| 124 | U. S., ..... | Parents, ..... | 2 50 | 3 00 | Semi-monthly, ..... | One, .. |
| 125 | U. S., ..... | Strangers, ..... | 2 50 | 4 00 | Semi-monthly, ..... | One, ... |
| 126 | U. S., ..... | Parents, ..... | ..... | 6 00 | Weekly, ..... | One, .... |
| 127 | U. S., ..... | Strangers, ..... | 2 00 | 4 84 | *..... | One, .... |
| 128 | U. S., ..... | Parents, ..... | ..... | 3 25 | *..... | One, .... |
| 129 | U. S., ..... | Parents, ..... | ..... | 4 00 | Weekly, ..... | One, ... |
| 130 | U. S., ..... | Parents, ..... | 2 50 | 3 00 | *..... | One, .... |
| 131 | U. S., ..... | Strangers, ..... | ..... | 3 02 | Weekly, ..... | One, .... |
| 132 | U. S., ..... | Parents, ..... | ..... | 4 25 | *..... | One, ... |
| 133 | U. S., ..... | Strangers, ..... | 2 00 | 4 25 | *..... | Two, ... |
| 134 | U. S., ..... | Parents, ..... | ..... | 2 75 | Weekly, ..... | Three, .. |
| 135 | Ireland, ..... | Strangers, ..... | 3 00 | 5 50 | Semi-monthly, ..... | One, .... |
| 136 | U. S., ..... | Parents, ..... | 2 50 | 3 25 | *..... | One .... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 481 | U. S., ..... | Parents, ..... | ..... | $2 75 | Weekly, ..... | One, .... |
| 482 | U. S., ..... | Parents, ..... | $1 00 | 3 00 | Weekly, ..... | Three, .. |
| 483 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | Weekly, ..... | One, .... |
| 484 | U. S., ..... | Parents, ..... | 1 00 | 3 00 | Weekly, ..... | Two, ... |
| 485 | Switzerland, ..... | Parents, ..... | 1 25 | 3 00 | Weekly, ..... | Four, ... |
| 486 | U. S., ..... | Parents, ..... | 50 | 2 40 | Weekly, ..... | One, .... |
| 487 | U. S., ..... | Parents, ..... | 1 00 | 3 00 | Weekly, ..... | One, .... |
| 488 | U. S., ..... | Parents, ..... | 1 60 | 3 20 | Weekly, ..... | Two, ... |
| 489 | U. S., ..... | Sister, ..... | 2 40 | 4 80 | Weekly, ..... | One, .... |
| 490 | U. S., ..... | Brother, ..... | 2 00 | 3 60 | Weekly, ..... | Two. .... |

* Paid when piece is done.

SILK MILL OPERATIVES—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation. If so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| Less, | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 11 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| Less, | 10 | No, | No, | |
| | 10 | No, | No, | |
| | 11 | No, | No, | |
| | 10 | No, | No, | |
| | 10 | No, | No, | |
| No; $4 less, | 10 | No, | No, | |
| The same, | 10 | No, | No, | |
| Less, | 10 | No, | No, | |

CANDY FACTORY EMPLOYES—LYCOMING COUNTY.

| | | | | |
|---|---|---|---|---|
| | 8 | No, | No, | |
| | 8 | No, | No, | |
| | 8 | No, | No, | |
| | 8 | No, | No, | |
| | 8 | No, | No, | |
| | 8 | No, | 2 weeks, | No. |
| | 8 | No, | No, | |
| | 8 | No, | 2 weeks, | No. |
| | 8 & 10 | No, | 2 weeks, | No. |
| | 8 & 10 | No, | 2 weeks, | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 491 | U. S., ..... | Parents, ..... | ..... | $3 00 | Weekly,..... | One, .... |
| 492 | U. S., ..... | Parents, ..... | 1 00 | 2 80 | Weekly,..... | One, .... |
| 493 | U. S., ..... | Parents, ..... | 1 00 | 2 80 | Weekly,..... | One, .... |
| 494 | U. S., ..... | Parents, ..... | 3 00 | 3 60 | Weekly,..... | Four, ... |
| 495 | U. S., ..... | Parents, ..... | 1 50 | 3 20 | Weekly,..... | One, .... |
| 496 | U. S., ..... | Parents, ..... | 1 50 | 3 20 | Weekly,..... | One, .... |
| 497 | U. S., ..... | Parents, ..... | 4 00 | 9 60 | Monthly,..... | One, .... |
| 498 | U. S., ..... | Parents, ..... | 2 50 | 2 50 | Weekly,..... | Four, ... |
| 499 | Switzerland, ..... | Parents, ..... | 1 25 | 2 75 | Weekly,..... | Two, ... |
| 500 | U. S., ..... | Parents, ..... | 1 50 | 2 75 | Weekly,..... | Two, ... |
| 501 | U. S., ..... | Parents, ..... | 1 50 | 2 75 | Weekly,..... | Two, ... |
| 502 | Switzerland, ..... | Parents, ..... | 1 25 | 2 75 | Weekly,..... | Two, ... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 361 | U. S., ..... | Parents, ..... | ..... | *..... | Semi-monthly, ..... | Three, .. |
| 362 | U. S., ..... | Parents, ..... | $2 00 | $2 62 | Semi-monthly, ..... | One, .. |
| 363 | U. S., ..... | Parents, ..... | 2 00 | 2 50 | Semi-monthly, ..... | One, .. |
| 364 | U. S., ..... | Strangers, ..... | ..... | 3 00 | Semi-monthly, ..... | Four, ... |
| 365 | U. S., ..... | Parents, ..... | 2 50 | 3 00 | Semi-monthly, ..... | One, .... |
| 366 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | Semi-monthly, ..... | Two, ... |
| 367 | U. S., ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | One, .... |
| 368 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | Semi-monthly, ..... | One, .... |
| 369 | U. S., ..... | Parents, ..... | 2 50 | 4 00 | Semi-monthly, ..... | One, ... |
| 370 | U. S., ..... | Strangers, ..... | 2 50 | 3 00 | Semi-monthly, ..... | One, .... |
| 371 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | Semi-monthly, ..... | Two, ... |
| 372 | U. S., ..... | Parents, ..... | 1 75 | 2 00 | Semi-monthly, ..... | One, ... |
| 373 | U. S., ..... | Sister, ..... | ..... | 2 75 | Semi-monthly, ..... | Four, ... |
| 374 | U. S., ..... | Parents, ..... | 2 00 | 2 50 | Semi-monthly, ..... | Three, .. |
| 375 | U. S., ..... | Parents, ..... | 1 00 | 2 75 | Semi-monthly, ..... | ..... |
| 376 | Sweden, ..... | Strangers, ..... | 2 00 | 3 50 | Semi-monthly, ..... | Two, ... |
| 377 | U. S., ..... | Parents, ..... | ..... | 4 50 | Semi-monthly, ..... | One, .... |
| 378 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | Semi-monthly, ..... | One, .... |
| 379 | U. S., ..... | Parents, ..... | ..... | 3 00 | Semi-monthly, ..... | Two, ... |
| 380 | U. S., ..... | Strangers, ..... | 2 00 | 3 50 | Semi-monthly, ..... | Two, .. |

*Piece work.

## CANDY FACTORY EMPLOYES—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | 2 weeks, ..... | No. |
| ..... | 8 | No, ..... | 2 weeks, ..... | No. |
| ..... | 8 | No, ..... | 2 weeks, ..... | No. |
| ..... | 8 | No, ..... | 2 weeks, ..... | No. |
| ..... | 8 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | Yes, ..... | 2 weeks, ..... | Yes. |
| No; $7.50 less, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 8 | No. ..... | No, ..... | ..... |

## PANTS FACTORY EMPLOYES—LYCOMING COUNTY.

| | | | | |
|---|---|---|---|---|
| No; 20 per cent. less, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| No; much less, ..... | 10½ | No, ..... | 3 or 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | Sometimes, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | Several weeks, .... | No. |
| ..... | 10 | No, ..... | 2 or 3 weeks,..... | No. |
| ..... | 10¼ | No, ..... | Sometimes, ..... | No. |
| ..... | 10 | No. ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | 2 to 3 weeks, ..... | No. |
| About one-half as much, ..... | 10 | No, ..... | 2 to 3 weeks, ..... | No. |
| No, ..... | 10 | No, ..... | 2 to 3 weeks, ..... | No. |
| No, ..... | 10 | No, ..... | Sometimes, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 381 | U. S., ..... | Parents, ..... | $2 00 | $3 50 | Semi-monthly, ..... | Two, ... |
| 382 | U. S., ..... | Parents, ..... | 2 00 | 4 00 | Semi-monthly, ..... | Two, .. |
| 383 | U. S., ..... | Parents, ..... | 2 00 | 4 00 | Semi-monthly, ..... | One, .... |
| 384 | U. S., ..... | Sister, ..... | 1 75 | 2 50 | Semi-monthly, ..... | Two, ... |
| 385 | U. S., ..... | Sister ..... | ..... | 2 00 | Semi-monthly, ..... | ..... |
| 386 | U. S., ..... .. | Strangers, ..... | 2 00 | 3 50 | Semi-monthly, ..... | Two, ... |
| 387 | U. S., ..... | Parents, ..... | 2 00 | *..... | Semi-monthly, ..... | Two, . . |
| 388 | U. S., ..... | Parents. ..... | ..... | 1 50 | Semi-monthly, ..... | ..... |
| 389 | U. S., ..... | Parents, ..... | 1 50 | 2 50 | Semi-monthly, ..... | One, . . . |
| 390 | U. S., ..... | Strangers, ..... | 2 50 | 3 00 | Semi-monthly, ..... | Three, .. |
| 391 | U. S., ..... | Parents, ..... | ..... | 2 00 | Semi-monthly, ..... | Three, .. |
| 392 | Germany, ..... | Parents, ..... | 3 00 | 3 50 | Semi-monthly, ..... | Four, ... |
| 393 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | Semi-monthly, ..... | Two, ... |
| 394 | U. S., ..... .. | Sister, ..... | 2 00 | 4 00 | Semi-monthly, ..... | One. .... |
| 395 | U. S., ..... | Parents, ..... | ..... | *..... | Semi-monthly, ..... | Four, ... |
| 396 | U. S., ..... | Parents, ..... | 2 50 | 4 00 | Semi-monthly, ..... | Two, ... |
| 397 | U. S., ..... | Parents, ..... | ..... | 2 50 | Semi-monthly, ..... | Two, ... |
| 398 | U. S., ..... | Parents, ..... | ..... | *..... | Semi-monthly, ..... | Two, . . |
| 399 | U. S., ..... | Parents, ..... | 2 50 | 3 00 | Semi-monthly, ..... | Three, .. |
| 400 | U. S., ..... | Strangers, ..... | 2 00 | 4 00 | Semi-monthly, ..... | Two, ... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 404 | U. S., ..... | Parents, ..... | ..... | $3 00 | Weekly,..... | One, .... |
| 405 | U. S., ..... | Parents, ..... | $1 50 | 3 00 | Weekly,..... | One, .... |
| 406 | U. S., ..... | Parents, ..... | 2 00 | 3 75 | Weekly,..... | Two, ... |
| 407 | U .S., ..... | Parents, ..... | 2 50 | 3 75 | Weekly,..... | Three, .. |
| 408 | U. S., ..... | Parents, ..... | ..... | 2 00 | Weekly,..... | One, .... |
| 409 | U. S., ..... | Parents, ..... | 2 00 | 3 50 | Weekly,..... | Two, ... |
| 410 | U. S., ..... | Parents, ..... | 1 25 | 2 25 | Weekly,..... | One, .... |
| 411 | U. S., ..... | Parents, ..... | 1 50 | 2 00 | Weekly,..... | One, .... |
| 412 | U. S., ..... | Parents, ..... | 2 50 | 3 50 | Weekly,..... | Two, ... |
| 413 | U. S., ..... | Parents, ..... | 2 50 | 3 25 | Weekly,..... | Three, .. |
| 414 | U. S., ..... | Parents, ..... | ..... | 3 00 | Weekly,..... | One, .... |
| 415 | U. S., ..... | Parents, ..... | 2 00 | 3 75 | Weekly,..... | One, .... |
| 416 | U. S., ..... | Parents, ..... | 1 00 | 2 50 | Weekly,..... | One, .... |
| 417 | U. S., ..... | Parents, ..... | 2 00 | 3 50 | Weekly,..... | Two, ... |

*Piece work.

PANTS FACTORY EMPLOYES—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No, ..... | 10 | No, ..... | Yes, ..... | No. |
| No, ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| No, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | ..... | ..... | ..... |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| No; about one-half, ..... | 10 | No, ..... | As desired, ..... | No. |
| No, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| Form $4 to $6 less, ..... | 9½ | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | ..... | ..... |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |

BRAID FACTORY EMPLOYES—LYCOMING COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| No; $10 to $12 less, ..... | 10 | No, ..... | No, ..... | ..... |
| No, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| No; about $2.50 less per week,... | 10 | No, ..... | No, ..... | ..... |
| No, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| No, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 301 | U. S., | Parents, | $1 50 | $6 00 | Weekly, | Five, |
| 302 | U. S., | Friends, | 2 50 | 5 00 | Weekly, | Two, |
| 303 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 304 | U. S., | Strangers, | 3 00 | 5 00 | Semi-monthly, | Three, |
| 305 | U. S., | Parents, | | 3 00 | Weekly, | Two, |
| 306 | U. S., | Parents, | | 4 00 | Weekly, | Two, |
| 307 | U. S., | Sister, | 3 50 | 4 00 | Weekly, | One, |
| 308 | U. S., | Sister, | 3 50 | 5 00 | Weekly, | Three, |
| 309 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 310 | U. S., | Brother, | 1 00 | 3 00 | Weekly, | Three, |
| 311 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | One, |
| 312 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 313 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 314 | U. S., | Parents, | 2 50 | 5 00 | Weekly, | Three, |
| 315 | U. S., | Parents, | 3 50 | 7 00 | Weekly, | Two, |
| 316 | U. S., | Parents, | 2 00 | 5 00 | Weekly, | Two, |
| 317 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 318 | U .S., | Parents, | 3 00 | 4 00 | Weekly, | Two, |
| 319 | U. S., | Parents, | 3 00 | 5 00 | Weekly, | Two, |
| 320 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 321 | U. S., | Parents, | | 3 00 | Weekly, | Two, |
| 322 | U. S,. | Parents, | | 3 00 | Weekly, | One, |
| 323 | U .S., | Parents, | | 3 00 | Weekly, | One, |
| 324 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | One, |
| 325 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | One, |
| 326 | U. S., | | 3 00 | 6 00 | Weekly, | Two, |
| 327 | U. S., | Parents, | 3 00 | 7 00 | Weekly, | Two, |
| 328 | U. S., | Parents, | | 4 00 | Weekly, | Four, |
| 329 | U. S., | Parents, | 3 50 | 6 00 | Weekly, | Three, |
| 330 | U. S., | Parents, | | 4 00 | Weekly, | Five, |
| 331 | U. S., | Parents, | | 4 00 | Weekly, | One, |
| 332 | U. S., | Keep house, | | 10 00 | Weekly, | Three, |
| 333 | U. S., | Parents, | | 5 00 | Weekly, | Three, |
| 334 | U. S., | Parents, | | 5 00 | Weekly, | Three, |
| 335 | U. S., | Brother, | 1 50 | 4 00 | Weekly, | Three, |
| 336 | U. S., | Parents, | | 3 00 | Weekly, | Two, |

SALESWOMEN—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No; $2 less, | 10½ | No, | 2 weeks, | No. |
| No, | 10 | No, | 2 weeks, | No. |
| | 8 | | 2 weeks, | No. |
| No; one-half less, | 10½ | No, | 2 weeks, | Paid 1 week. |
| | 10 | No. | 2 weeks, | No. |
| | 10 | No, | 1 week, | Yes. |
| | 9¼ | No, | 2 or 3 weeks, | Paid 1 week. |
| No, | 9¼ | No, | 2 or 3 weeks, | Paid 1 week. |
| Less, | 10 | No, | 2 or 3 weeks, | Paid 1 week. |
| No; from $5 to $8 less, | 9 | Yes, | 2 or 3 weeks, | No. |
| No; from $5 to $8 less, | 10 | No, | 2 or 3 weeks, | Paid 1 week. |
| | 9 & 12 (s), | Yes, | 2 or 3 weeks, | No. |
| | 9 | No, | 2 or 3 weeks, | No. |
| About the same, | 9½ | No, | 2 or 3 weeks, | No. |
| No, | 10 & 10½ | Yes, | Yes, | No. |
| No, | 9 & 12 (s), | Yes, | 2 weeks, | No. |
| | 10 | No, | No, | |
| No; about $9 less, | 10 | No, | 2 weeks, | No. |
| | | No, | 2 weeks, | Paid 1 week. |
| | 10 | No, | 2 weeks, | Paid 1 week. |
| | 10 & 14 (s), | No.* | 4 weeks, | No. |
| No; about one-third less, | 9¼ & 13¼ (s), | No, | 2 weeks, | Paid 1 week. |
| | 10¼ | No, | 2 weeks, | Paid 1 week. |
| No; two-thirds less, | 10 & 14 (s), | No, | 2 weeks, | Paid 1 week. |
| No; two-thirds less, | 10 & 14 (s), | No, | 2 weeks, | Paid 1 week. |
| No; from $4 to $5 less, | 9 & 11 (s), | No, | 2 weeks, | Paid 1 week. |
| No; from $3 to $5 less, | 9 & 12 (s), | No, | 2 weeks, | No. |
| No, | 10 | No, | 2 weeks, | No. |
| No; $5 less, | 9 & 11(s), | No, | 2 weeks, | Paid 1 week. |
| | 9¼ & 12¼ (s), | No, | 1 to 3 weeks, | Paid 1 week. |
| | 10½ | Yes, | 2 to 4 weeks, | No. |
| No; from $2 to $4 less, | 10 | No, | 2 weeks, | No. |
| No, | 9 & 12 (s), | No, | 2 weeks, | No. |
| No, | 9 & 12 (s), | No, | 2 weeks, | No. |
| No; from $11 to $14 less, | 9 & 12 (s), | No, | 2 weeks, | No. |
| | 9 & 12 (s), | Sometimes, | 2 weeks, | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 337 | U. S., ..... | Parents, ..... | $2 00 | $5 00 | Weekly,..... | One, ... |
| 338 | U. S., ..... | Parents, ..... | 2 00 | 5 00 | Weekly,..... | Three, .. |
| 339 | U. S., ..... | Parents, ..... | 2 00 | 4 00 | Weekly,..... | Three, .. |
| 340 | Scotland, ..... | Parents, ..... | 3 00 | *..... | Weekly,..... | One, .... |
| 341 | U. S., ..... | Strangers, ..... | 2 50 | 7 00 | Weekly,..... | One, .... |
| 342 | U. S., ..... | Parents, ..... | ..... | 7 00 | Weekly,..... | Two, ... |
| 343 | U. S., ..... | Parents, ..... | 3 50 | 8 00 | Weekly,..... | Three, .. |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 241 | U. S., ..... | Parents, ..... | $3 50 | $8 00 | Monthly,..... | One, .... |
| 242 | U. S., ..... | Parents, ..... | 2 50 | 8 00 | Monthly,..... | One, .... |
| 243 | U. S., ..... | Parents, ..... | ..... | *7 50 | Monthly,..... | Three, .. |
| 244 | U. S., ..... | Parents, ..... | 3 00 | 5 50 | Monthly,..... | One, .... |
| 245 | U. S., ..... | Parents, ..... | 2 50 | 8 00 | Monthly,..... | One, .... |
| 246 | U. S., ..... | Parents, ..... | ..... | 7 50 | Monthly,..... | One, .... |
| 247 | U. S., ..... | Parents, ..... | 4 00 | 6 00 | Monthly,..... | Three, .. |
| 248 | U. S., ..... | Parents, ..... | 2 00 | 6 00 | Monthly,..... | One, .... |
| 249 | U. S., ..... | Parents, ..... | ..... | 7 50 | Monthly,..... | One, .... |
| 250 | U. S., ..... | Parents, ..... | ..... | 7 00 | Monthly,..... | Two, ... |
| 251 | U. S., ..... | Parents, ..... | 2 50 | 7 50 | Monthly,..... | One, .... |
| 252 | U. S., ..... | Parents, ..... | ..... | 8 00 | Monthly,..... | Two, ... |
| 253 | U. S., ..... | Parents, ..... | 3 00 | 5 50 | Monthly,..... | Three, .. |
| 254 | U. S., ..... | Parents, ..... | 6 00 | 7 00 | Monthly,..... | Three, .. |
| 255 | England, ..... | Strangers, ..... | 2 25 | 5 00 | Monthly,..... | Two, ... |
| 256 | U. S., ..... | Parents, ..... | ..... | 7 00 | Monthly,..... | Three, .. |
| 257 | U. S., ..... | Parents, ..... | 4 00 | 6 00 | Monthly,..... | One, ... |
| 258 | U. S., ..... | Parents, ..... | 2 50 | 6 00 | Monthly,..... | One, ... |
| 259 | U. S., ..... | Parents, ..... | ..... | 6 00 | Monthly,..... | One, .... |
| 260 | U. S., ..... | Parents, ..... | ..... | 7 50 | Monthly,..... | Two, ... |
| 261 | U. S., ..... | Parents, ..... | 3 00 | 9 00 | Monthly,..... | Two, ... |
| 262 | U. S., ..... | Parents, ..... | 2 50 | 6 00 | Monthly..... | One, .... |
| 263 | U. S., ..... | Parents, ..... | 3 50 | 7 00 | Monthly,..... | One, ... |
| 264 | U. S., ..... | Parents, ..... | 3 00 | 8 00 | Monthly,..... | One, .... |
| 265 | U. S., ..... | Keep house, ..... | ..... | 7 50 | Monthly,..... | One, .... |

* Paid by percentage.
*Piece work.

SALESWOMEN—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| No; less, ..... | 9 & 12 (s), | No, ..... | 2 weeks, ..... | No. |
| No; less, ..... | 9 | No, ..... | 2 weeks, ..... | No. |
| No; one-half less, ..... | 9 & 12½(s), | No, ..... | 2 to 6 weeks, ..... | No. |
| ..... | 10 & 14 (s), | No, ..... | 2 to 6 weeks, ..... | No. |
| The same, ..... | 10 | No, ..... | No, ..... | ..... |
| No; at least $3 less, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| No; $4 to $7 less, ..... | 9½ & 12(s), | No, ..... | 2 weeks, ..... | No. |

RUBBER WORKS EMPLOYES—LYCOMING COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 9 & 11 | No, ..... | 6 to 10 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| Yes, ..... | 11 | No, ..... | 6 to 10 weeks, ..... | No. |
| ..... | 6 & 7 | No, ..... | 4 to 6 weeks, ..... | No. |
| The same, ..... | 10 | No, ..... | 6 to 10 weeks, ..... | No. |
| The same, ..... | 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| The same, ..... | 10 | No, ..... | 4 to 6 weeks, ..... | No. |
| ..... | 10 & 11 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 10 | No, ..... | 6 to 10 weeks, ..... | No. |
| ..... | 11 | No, ..... | No, ..... | ..... |
| Yes, ..... | 10 | No, ..... | 4 to 8 weeks, ..... | No. |
| Yes, ..... | 10½ & 11 | No, ..... | No, ..... | ..... |
| The same, ..... | 10 | No, ..... | 4 to 6 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 to 10 weeks, ..... | No. |
| ..... | 11 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 11 | No, ..... | 5 to 10 weeks, ..... | No. |
| $1.25 less, ..... | 10 | No, ..... | 2 months, ..... | No. |
| Yes, ..... | 10 | No, ..... | 4 to 10 weeks, ..... | No. |
| ..... | 10 | No, ..... | 6 or 7 weeks, ..... | No. |
| ..... | 10 | No, ..... | 6 weeks, ..... | No. |
| ..... | 10 | No, ..... | 6 weeks, ..... | No. |
| ..... | 10 | No, ..... | 6 weeks, ..... | No. |
| ..... | 10 | No, ..... | 6 to 8 weeks, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 266 | U. S., ..... | Parents, ..... | $2 50 | $8 00 | Monthly,..... | One, ... |
| 267 | U. S., ..... | Parents, ..... | 2 50 | 6 50 | Monthly,..... | Four, ... |
| 268 | U. S., ..... | Parents, ..... | 4 50 | 7 50 | Monthly,..... | One, .... |
| 269 | U. S., ..... | Parents, ..... | ..... | 7 00 | Monthly,..... | One, .... |
| 270 | U. S., ..... | Parents, ..... | 3 00 | 6 00 | Monthly,..... | One, .... |
| 271 | U. S., ..... | Parents, ..... | ..... | 8 30 | Monthly,..... | ..... |
| 272 | U. S., ..... | Parents, ..... | 2 75 | 7 50 | Monthly,..... | Two, ... |
| 273 | U. S., ..... | Aunt, ..... | 2 50 | 6 00 | Monthly,..... | One, .... |
| 274 | U. S., ..... | Sister, ..... | 2 00 | 6 00 | Monthly,..... | One, .... |
| 275 | U. S., ..... | Parents, ..... | 2 50 | 6 00 | Monthly,..... | One, ... |
| 276 | U. S., ..... | Parents, ..... | 2 50 | 7 00 | Monthly,..... | One, .... |
| 277 | U. S., ..... | Parents, ..... | ..... | 8 70 | Monthly,..... | One, .... |
| 278 | U. S., ..... | Parents, ..... | 3 50 | 8 00 | Monthly,..... | ..... |
| 279 | U. S., ..... | Parents, ..... | 3 00 | 7 00 | Monthly,..... | ..... |
| 280 | U. S., ..... | Parents, ..... | 3 75 | 7 00 | Monthly,..... | One, .... |
| 281 | U. S., ..... | Sister, ..... | 3 00 | 7 00 | Monthly,..... | One, .... |
| 282 | U. S., ..... | Strangers, ..... | 2 50 | 6 00 | Monthly,..... | One, .... |
| 283 | U. S., ..... | Parents, ..... | 3 75 | 7 00 | Monthly,..... | One, .... |
| 284 | U. S., ..... | Parents, ..... | ..... | 7 50 | Monthly,..... | One, .... |
| 285 | U. S., ..... | Parents, ..... | ..... | 4 50 | Weekly,..... | One, .... |
| 286 | U. S., ..... | Parents, ..... | ..... | 7 00 | Monthly,..... | Five, ... |
| 287 | U. S., ..... | Keeping house, .... | ..... | 6 60 | Monthly,..... | Two, ... |
| 288 | U. S., ..... | Friends, ..... | 2 50 | 6 00 | Monthly,..... | Three, .. |
| 289 | U. S., ..... | Parents, ..... | ..... | 8 40 | Monthly,..... | One, ... |
| 290 | U. S., ..... | Parents, ..... | ..... | 6 00 | Monthly,..... | Two, .. |
| 291 | U. S., ..... | Parents, ..... | 3 00 | 7 50 | Monthly,..... | One, .... |
| 292 | U. S., ..... | Strangers, ..... | 3 00 | 6 50 | Monthly,..... | One, .... |
| 293 | U. S., ..... | Parents, ..... | 4 00 | 7 50 | Monthly,..... | One, .... |
| 294 | U. S., ..... | Parents, ..... | ..... | 6 00 | Monthly,..... | One, .... |
| 295 | U. S., ..... | Keep house, ..... | ..... | 8 30 | Monthly,..... | One, .... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 151 | U. S., ..... | Parents, ..... | $2 00 | $3 00 | Weekly,..... | Two, ... |
| 152 | U. S., ..... | Parents, ..... | 2 00 | 1 50 | Weekly,..... | Three, .. |
| 153 | U. S., ..... | Grand-parents, ..... | 2 00 | 3 00 | Weekly,..... | Four, ... |

RUBBER WORKS EMPLOYES—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| Yes, ..... | 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| Yes, ..... | 8 & 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 11 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| The same, ..... | 10 | No, ..... | 6 weeks, ..... | No. |
| The same, ..... | 7 to 10 | No, ..... | 6 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 8 weeks, ..... | No. |
| ..... | 10 | No, ..... | 6 weeks, ..... | No. |
| ..... | 10 to 11 | No, ..... | 2 to 6 weeks, ..... | No. |
| The same, ..... | 10 | No, ..... | 6 weeks, ..... | No. |
| ..... | 10 | No, ..... | 8 to 10 weeks, ..... | No. |
| ..... | 10 to 11 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 10 to 11 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| No; less, ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 to 11 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| No; less, ..... | 10 | No, ..... | 6 weeks, ..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| ..... | 10 | No, ..... | Yes, ..... | No. |
| The same, ..... | 10 | No, ..... | Yes, ..... | No. |
| No; less, ..... | 10 | No, ..... | 4 to 8 weeks, ..... | No. |
| ..... | 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 10½ | No, ..... | 6 weeks, ..... | No. |
| ..... | 11 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 9 to 11 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 10¾ | No, ..... | 6 to 8 weeks, ..... | No. |

SUSPENDER FACTORY EMPLOYES—LYCOMING COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 10 & 5 (s), | No, ..... | No, ..... | ..... |
| ..... | 10 & 5 (s), | No, ..... | No, ..... | ..... |
| ..... | 10 | Yes, ..... | No, ..... | ..... |

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 154 | U. S., | Parents, | $2 00 | $2 25 | Weekly, | Two, |
| 155 | U. S., | Parents, | 1 50 | 2 00 | Weekly, | Two, |
| 156 | U. S., | Parents, | | 2 50 | Weekly, | Three, |
| 157 | U. S., | Parents, | 1 50 | 2 00 | Weekly, | Two, |
| 158 | U. S., | Parents, | 1 50 | 4 00 | Weekly, | Two, |
| 159 | U. S., | Parents, | 1 50 | 2 00 | Weekly, | Three, |
| 160 | U. S., | Parents, | | 1 50 | Weekly, | Two, |
| 161 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 162 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 163 | U. S., | Sister, | 2 00 | 4 50 | Weekly, | One, |
| 164 | U. S., | Strangers, | 3 00 | 4 00 | Weekly, | Two, |
| 165 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | Two, |
| 166 | U. S., | Guardian, | 2 00 | 2 50 | Weekly, | One, |
| 167 | U. S., | Parents, | | 4 50 | Weekly, | One, |
| 168 | U. S., | Strangers, | 2 50 | 4 25 | Weekly, | One, |
| 169 | U. S., | Brother, | 2 00 | 3 00 | Weekly, | One, |
| 170 | U. S., | Parents, | 3 00 | 4 75 | Weekly, | Two, |
| 171 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | Two, |
| 172 | U. S., | Strangers, | 3 00 | 4 00 | Weekly, | Two, |
| 173 | U. S., | Parents, | | 4 00 | Weekly, | Two, |
| 174 | U. S., | Parents, | 2 50 | 3 50 | Weekly, | One, |
| 175 | U. S., | Sister, | 2 50 | 3 25 | Weekly, | One, |
| 176 | Russia, | Parents, | 1 75 | 3 00 | Weekly, | One, |
| 177 | U. S., | House keeping, | | 3 50 | Weekly, | One, |
| 178 | U. S., | Parents, | 2 50 | 3 50 | Weekly, | One, |
| 179 | U. S., | Parents, | 3 00 | 3 50 | Weekly, | One, |
| 180 | U. S., | Strangers, | 2 50 | 3 50 | Weekly, | One, |
| 181 | U. S., | Parents, | 3 00 | 3 50 | Weekly, | One, |
| 182 | U. S., | Parents, | | 6 00 | Weekly, | One, |
| 183 | U. S., | Parents, | | 4 00 | Weekly, | Four, |
| 184 | U. S., | Parents, | 2 00 | 3 50 | Weekly, | Three, |
| 185 | U. S., | Parents, | | 4 50 | Semi-monthly, | One, |
| 186 | Germany, | Parents, | | 3 75 | Semi-monthly, | One, |
| 187 | U. S., | Parents, | | 5 00 | Semi-monthly, | Two, |
| 188 | U. S., | Strangers, | 2 00 | 2 50 | Weekly, | One, |
| 189 | U. S., | Parents, | 2 00 | 5 00 | Weekly, | One, |

SUSPENDER FACTORY EMPLOYES—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, If less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, If so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 10 & 5 (s), | No, ..... | No, ..... | ..... |
| ..... | 10 & 5 (s), | No. ..... | No, ..... | ..... |
| ..... | 8 & 4 (s), | No, ..... | No, ..... | ..... |
| ..... | 10 & 5 (s), | No, ..... | No, ..... | ..... |
| No, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| No, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, but laid off 8 w. | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 4 to 6 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 8 & 10 | No, ..... | 4 to 6 weeks, ..... | No. |
| ..... | 10 | No, ..... | 9 or 10 weeks, ..... | No. |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 8 & 10 | No, ..... | 5 or 6 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 or 3 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 10 | No, ..... | 3 or 4 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 8 & 10 | No. ..... | 2 to 3 months, .... | No. |
| ..... | 10 | No, ..... | 4 to 6 weeks ..... | No. |
| ..... | 10 | No, ..... | 4 to 6 weeks ..... | No. |
| ..... | 9 | No, ..... | No, ..... | ..... |
| The same, ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 8 & 10 | No, ..... | 10 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 10 weeks, ..... | No. |

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 190 | U. S., | Parents, | | $5 00 | Weekly, | Several. |
| 191 | U. S., | Parents, | | 2 50 | Weekly, | One, |
| 192 | U. S., | Parents, | $2 50 | 2 50 | Weekly, | Two, |
| 193 | U. S., | Parents, | 2 50 | 4 00 | Weekly, | Two, |
| 194 | U. S., | Parents, | 3 50 | 7 50 | Weekly, | One, |
| 195 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | One, |
| 196 | U. S., | Parents, | | 4 50 | Weekly, | Two, |
| 197 | U. S., | Grandparents, | 1 50 | 2 50 | Weekly, | Three, |
| 198 | U. S., | Parents, | | 2 50 | Weekly, | Three, |
| 199 | U. S., | Strangers, | 2 50 | 5 00 | Weekly, | Two, |
| 200 | U. S., | Parents, | | 5 00 | Weekly, | Two, |
| 201 | U. S., | Parents, | 2 50 | 5 00 | Weekly, | Two, |
| 202 | U. S., | Parents, | 2 50 | 5 00 | Weekly, | Two, |
| 203 | Germany, | Parents, | | 5 00 | Weekly, | One, |
| 204 | U. S., | Parents, | | 2 50 | Weekly, | Two, |
| 205 | U. S., | Parents, | | 2 50 | Weekly, | Two, |
| 206 | U. S., | Strangers, | 3 00 | 5 00 | Weekly, | One, |
| 207 | U. S., | Keep house, | | 6 00 | Weekly, | One, |
| 208 | U. S., | Parents, | 2 00 | 2 50 | Weekly, | Two, |
| 209 | U. S., | Parents, | 2 75 | 3 75 | Weekly, | Three, |
| 210 | U. S., | Parents, | | 5 00 | Weekly, | One, |
| 211 | U. S., | Parents, | | 2 50 | Weekly, | Two, |
| 212 | U. S., | Keep house, | 2 50 | 3 50 | Weekly, | One, |
| 213 | U. S., | Parents, | 3 00 | 6 00 | Weekly, | Two, |
| 214 | U. S., | Parents, | | 3 00 | Weekly, | Two, |
| 215 | U. S., | Parents, | | 3 00 | Weekly, | One, |
| 216 | U. S., | Parents, | | 2 50 | Weekly, | One, |
| 217 | U. S., | Parents, | 1 00 | 3 00 | Weekly, | One, |
| 218 | U. S., | Strangers, | 2 25 | 4 00 | Weekly, | One, |
| 219 | U. S., | Keeping house, | | 4 00 | Weekly, | One, |
| 220 | U. S., | Strangers, | 3 50 | 6 00 | Weekly, | Three, |
| 221 | U. S., | Parents, | | 6 00 | Weekly, | Three, |
| 222 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | One, |
| 223 | U. S., | Parents, | 1 50 | 3 00 | Weekly, | Three, |
| 224 | U. S., | Parents, | 3 00 | 4 00 | Weekly, | One, |
| 225 | U. S., | Strangers, | 3 00 | 4 00 | Weekly, | One, |

SUSPENDER FACTORY EMPLOYES—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 9 & 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 10 weeks, ..... | No. |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 8 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | Several weeks, ... | No. |
| ..... | 9 | No, ..... | 4 to 6 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 10 weeks ..... | No. |
| ..... | 8 & 10 | No, ..... | 10 weeks ..... | No. |
| ..... | 8 & 10 | No, ..... | 10 weeks ..... | No. |
| ..... | 8 & 10 | No, ..... | Several weeks, .... | No. |
| ..... | 10 | No, ..... | 10 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 10 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 10 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 10 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 10 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 10 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 8 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 10 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 10 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 5 or 6 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | 10 weeks, ..... | No. |
| ..... | 7 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 6 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 10 | No, ..... | If desired, ..... | No. |
| ..... | 9 | No, ..... | No, ..... | ..... |
| $12 less per week, ..... | 9½ & 10 | No, ..... | No, ..... | ..... |
| ..... | 9 & 10 | No, ..... | If desired, ..... | No. |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 8 & 10 | No, ..... | If desired, ..... | No. |
| ..... | 8 & 10 | No, ..... | No, ..... | ..... |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 226 | U. S., ..... | Parents, ..... | $3 00 | $4 00 | Weekly,..... | Two, ... |
| 227 | U .S., ..... | Strangers, ..... | 2 00 | 3 00 | Weekly,..... | Two, ... |
| 228 | U. S., ..... | Parents, ..... | 3 00 | 4 00 | Weekly,..... | Two, ... |
| 229 | U. S., ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | One, .... |
| 230 | U. S., ..... | Parents, ..... | 2 00 | 3 00 | Weekly,..... | Three, .. |
| 231 | U. S., ..... | Parents, ..... | ..... | 3 00 | Weekly,..... | Two, ... |
| 232 | U. S., ..... | Strangers, ..... | 3 00 | 6 00 | Weekly,..... | Two, ... |
| 233 | U. S., ..... | Parents, ..... | ..... | 4 00 | Weekly,..... | One, .... |
| 234 | U. S., ..... | Keeping house, .... | ..... | 3 25 | Weekly,..... | Two, ... |
| 235 | U. S., ..... | Parents, ..... | ..... | 3 50 | Weekly,..... | One, ... |
| 236 | U. S., ..... | Parents, ..... | 2 00 | 3 75 | Weekly,..... | One, .... |
| 237 | U. S., ..... | Parents, ..... | 2 00 | 3 50 | Weekly,..... | Two, ... |
| 238 | U. S., ..... | Parents, ..... | 3 00 | 3 50 | Weekly,..... | Two, ... |
| 239 | U. S., ..... | Relatives, ..... | 2 00 | 3 00 | Weekly,..... | One, .... |
| 240 | U. S., ..... | Parents, ..... | 3 00 | 6 00 | Weekly,..... | One, .... |
| 240 | U. S., ..... | Parents, ..... | ..... | 4 50 | Weekly,..... | Two, ... |
| 240 | U. S., ..... | Parents, ..... | ..... | 4 80 | Weekly,..... | One, .... |
| 240 | U. S., ..... | Parents, ..... | ..... | 3 75 | Weekly,..... | Two, ... |
| 240- | Ireland, ..... | Strangers, ..... | 3 00 | 3 75 | Weekly,..... | One, .... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 541 | U. S., ..... | Uncle, ..... | ..... | $3 00 | Weekly,..... | Three, .. |
| 542 | U. S., ..... | Sister, ..... | ..... | 3 50 | Weekly,..... | One, ... |
| 543 | U. S., ..... | Sister, ..... | ..... | 3 50 | Weekly,..... | One, .... |
| 544 | U. S., ..... | Parents, ..... | ..... | 5 00 | Weekly,..... | Two, .. |
| 545 | U. S., ..... | Parents, ..... | $2 00 | 4 20 | Weekly,..... | Four, ... |
| 546 | U. S., ..... | Keep house, ..... | ..... | 4 40 | Weekly,..... | One, .... |
| 547 | U. S., ..... | Keep house, ..... | ..... | 3 50 | Weekly,..... | Two, .. |
| 548 | U. S., ..... | Parents, ..... | ..... | 3 00 | Weekly,..... | Three, .. |
| 549 | U. S., ..... | Parents, ..... | ..... | 3 00 | Weekly,..... | Three, .. |
| 550 | U .S., ..... | Strangers, ..... | 2 50 | 5 00 | Weekly,..... | Three, .. |
| 551 | U. S., ..... | Parents, ..... | 2 50 | 4 00 | Weekly,..... | One, .... |
| 552 | U. S., ..... | Parents, ..... | 3 00 | 5 00 | Weekly,..... | Two, .. |
| 553 | U. S.. ..... | Parents, ..... | 5 00 | 6 50 | Weekly,..... | Two, ... |

## SUSPENDER FACTORY EMPLOYES—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness? | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 8 & 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | No, ..... | ..... |
| ..... | 8 & 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 9 | No, ..... | No, ..... | ..... |
| ..... | 8 & 10 | No, ..... | 6 to 8 weeks, ..... | No. |
| ..... | 8 & 10 | No, ..... | No, ..... | ..... |
| ..... | 8 & 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| No; about $7 less, ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No. ..... | ..... |
| ..... | 9½ & 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |
| ..... | 10 | No, ..... | No, ..... | ..... |

## SHOE FACTORY EMPLOYES—LYCOMING COUNTY.

| | | | | |
|---|---|---|---|---|
| No; less, ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10 | No, ..... | 2 months, ..... | No. |
| ..... | 10 | No, ..... | 2 weeks, ..... | No. |
| No; one-half less, ..... | 4, 8, 9 & 10 | No, ..... | Yes, ..... | No. |
| ..... | 5 to 10 | No, ..... | 2 months, ..... | No. |
| No; less, ..... | 10 | No, ..... | 4 weeks, ..... | No. |
| ..... | 9 to 10 | No, ..... | 2 months, ..... | No. |
| ..... | 1 to 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 8 & 9 | No, ..... | 4 weeks, ..... | No. |
| ..... | 8 to 10 | No, ..... | 2 weeks, ..... | No. |
| ..... | 8 to 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 8 to 10 | No, ..... | 2 to 4 weeks, ..... | No. |

WOMEN IN INDUSTRY—

| Office number. | Nationality—where born? | Do you live with parents, guardians or strangers? | Amount paid per week for board. | What is the amount of wages paid to you per week? | Are you paid weekly, monthly or semi-monthly? | How many different situations have you filled since you commenced work? |
|---|---|---|---|---|---|---|
| 554 | U. S., ..... | Parents, ..... | $2 00 | $2 50 | Weekly,..... | Two, ... |
| 555 | U. S., ..... | Parents, ..... | ..... | 4 75 | Weekly,..... | One, ... |
| 556 | U. S., ..... | Parents, ..... | ..... | 5 00 | Weekly,..... | One, .... |

WOMEN IN INDUSTRY—

| | | | | | | |
|---|---|---|---|---|---|---|
| 557 | U. S., ..... | Parents, ..... | $1 50 | $4 00 | Weekly,..... | One, .... |
| 558 | U. S., ..... | Parents, ..... | ..... | 4 35 | Semi-monthly, ..... | One, ... |
| 559 | U. S., ..... | Parents, ..... | ..... | 4 37½ | Semi-monthly, ..... | Two, ... |
| 560 | U. S., ..... | Parents, ..... | ..... | 4 37½ | Semi-monthly, ..... | One, .... |
| 561 | U. S., ..... | Parents, ..... | ..... | 6 00 | Semi-monthly, . ... | One, .... |
| 562 | U. S., ..... | Parents, ..... | ..... | 3 75 | Semi-monthly, ..... | One, .... |
| 563 | U. S., ..... | Parents, ..... | ..... | 3 75 | Semi-monthly, ..... | One, .... |
| 564 | U. S., ..... | Parents, ..... | 2 50 | 5 00 | Semi-monthly, ..... | One, .... |
| 565 | U. S., ..... | Parents, ..... | ..... | 5 25 | Semi-monthly, ..... | Two, ... |
| 566 | U. S., ..... | Parents, ..... | ..... | 6 25 | Semi-monthly, ..... | One, .... |
| 567 | U. S., ..... | Parents, ..... | 3 00 | 6 50 | Weekly,..... | One, .... |
| 568 | U. S., ..... | Parents, ..... | ..... | 6 00 | Semi-monthly, ..... | One, .... |
| 569 | U. S., ..... | Parents, ..... | ..... | 6 00 | Weekly,..... | One, .... |
| 570 | U. S., ..... | Parents, ..... | 2 00 | 6 00 | Weekly,..... | Three, .. |

SHOE FACTORY EMPLOYES—LYCOMING COUNTY.

| Do you receive the same compensation as a man for the same class of work, if less, how much less? | How many hours are you employed each day? | Are you paid for time lost by sickness. | Are you allowed an annual vacation, if so, for how long? | Are you paid for the time allowed for vacation? |
|---|---|---|---|---|
| ..... | 8 to 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| ..... | 5 to 10 | No, ..... | 2 to 4 weeks, ..... | No. |
| No; a great deal less, ..... | 9½ | No, ..... | As long as desired, | No. |

MISCELLANEOUS—LYCOMING COUNTY.

| | | | | |
|---|---|---|---|---|
| ..... | 8½ & 10(s), | No, ..... | 2 weeks, ..... | No. |
| ..... | 9 | Yes, ..... | 2 weeks, ..... | Yes. |
| ..... | 9 | Yes, ..... | 2 weeks, ..... | Yes. |
| ..... | 9 | Yes, ..... | 2 weeks, ..... | Yes. |
| ..... | 9 | Yes, ..... | 2 weeks, ..... | Yes. |
| ..... | 9 | Yes, ..... | 2 weeks, ..... | Yes. |
| No; I think one-half less, ..... | 9 | Yes, ..... | 2 weeks, ..... | Yes. |
| The same, ..... | 9 | Yes, ..... | 2 weeks, ..... | Yes. |
| ..... | 9 | Yes, ..... | 2 weeks, ..... | Yes. |
| ..... | 9 | Yes, ..... | 2 weeks, ..... | Yes. |
| No; $1 less, ..... | 8½ | Yes, ..... | No, ..... | ..... |
| No; less, ..... | 8 to 9 | Yes, ..... | 2 weeks. | |
| No; $3 or $4 less, ..... | 9 | Yes, ..... | ..... | ..... |
| No; one-half less, ..... | 10 & 14 (s), | No, ..... | No, ..... | ..... |

# BUILDING TRADES.

An investigation was conducted by the Bureau during 1894 relating to the condition of the building trades in this State. The persons employed in these trades include bricklayers, stone-masons, plasterers, metal-roofers, slate-roofers, tinners, plumbers and carpenters. No attempt was made to collect statistics from all of the persons engaged in these trades, but only from a sufficient number in various localities to show their general condition, modes of employment, etc. To collect complete statistics would have required more time and means than were at the disposal of the Bureau; besides, probably the more important results would not have been different from the returns herewith presented:

On the whole, are the conditions of any class included in this inquiry improving or becoming worse with respect to their means or income? The tendency of wages for some years has been downward, but so also has been the cost of living; and in many cases the prices of food, clothing, etc., have fallen more rapidly than earnings. Even if this fact be true, another thing hardly less important must be considered, namely: are the working people as steadily employed as they were a few years ago? In the report of last year some statistics were published answering this question, to some extent, with respect to those engaged in iron, steel, textile and other manufactures. It is well known that during the last two years, especially, production has greatly declined and consequently there has been less regularity in employment than during previous years. Employment in the building trades, even in the best times, is affected by the weather. The introduction of machinery also has certainly lessened for an indefinite period the quantity of work.

A number of questions were asked those engaged in the building trades to which various answers were returned. Some remarks and explanations may be made concerning these inquiries.

One of the more important questions relates to the varying rate of wages of the several classes engaged in the building trades in different places. For the purpose of comparison, the highest wages are taken of men in various places. These show some interesting results. For example, the bricklayers in Philadelphia for the years

1890, 1891, 1892, 1893 and 1894 received 70, 87, 61, 61 and 56 cents per hour. In Pittsburgh the rates were 56, 56, 50, 50 and 45 cents per hour. The lowest rates were in Crawford, Cambria, Lancaster and Lackawanna counties, the rates in the last mentioned county being 39, 39, 44, 44 and 39 cents per hour. One of the striking results in Lackawanna county is the slight change in the rates for the last five years. The rates advanced for 1892 and 1893, but are the same now as they were five years ago. In most places there has been some decline, but this is by no means uniform. The decline from 70 to 56 cents per hour in Philadelphia appears to have been the greatest. In Westmoreland county the decline was from 56 to 35 cents per hour; in Erie there has been an actual advance from 40 to 43 cents per hour; in Lawrence county the rate has remained uniform during the entire period, 45 cents per hour, and the same is true in Montgomery county.

On the other hand, if the rates have varied in the different places, so also has the cost of living, especially rents. Probably there is less variation in the ordinary necessaries of life in the various places, but it is well known that in Pittsburgh especially the rents are much higher than they are in Philadelphia, and perhaps in many other places in the State. The following table gives the highest rates paid during the last five years to the several classes mentioned in different places:

*Wages per hour of Persons Engaged in the Building Trades During the Years 1890-94.*

| | 1890. | 1891. | 1892. | 1893. | 1894. |
|---|---|---|---|---|---|
| *Bricklayers.* | | | | | |
| Philadelphia, | 56 | 56 | 61 | 61 | 56 |
| Allegheny, | 56 | 56 | 50 | 50 | 45 |
| Beaver, | 45 | 45 | 50 | 44 | 44 |
| Mercer, | 45 | 45 | 45 | 45 | 40 |
| Blair, | 40 | 40 | 50 | 40 | 40 |
| Westmoreland, | 56 | 56 | 45 | 45 | 40 |
| Butler, | 44 | 44 | 44 | 44 | 39 |
| Venango, | 53 | 50 | 45 | 45 | 47 |
| Crawford, | 40 | 40 | 40 | 35 | 33 |
| Erie, | 40 | 45 | 45 | 45 | 43 |
| Cambria, | 40 | 35 | 35 | 35 | 35 |
| Lawrence, | 45 | 45 | 45 | 45 | 45 |
| Lancaster, | 41 | 41 | 40 | 40 | 30 |
| Montgomery, | 45 | 45 | 45 | 45 | 45 |
| Lackawanna, | 39 | 39 | 44 | 44 | 39 |
| Lycoming, | 45 | 43 | 40 | 40 | 40 |
| *Plasterer.* | | | | | |
| Philadelphia, | 50 | 50 | 50 | 45 | 45 |
| Mercer, | 33 | 33 | 33 | 33 | 33 |
| Blair, | 39 | 39 | 38 | 38 | 30 |
| Westmoreland, | 33 | 33 | 39 | 36 | 33 |
| Butler, | 33 | 33 | 39 | 33 | 33 |
| Venango, | 28 | 33 | 33 | 33 | 33 |
| Beaver, | 33 | 33 | 33 | 33 | 33 |
| Lycoming, | 39 | 39 | 33 | 36 | 25 |
| *Stone-mason.* | | | | | |
| Beaver, | 40 | 40 | 40 | 40 | 33 |
| Mercer, | 40 | 40 | 45 | 45 | 40 |
| Blair, | 30 | 30 | 35 | 35 | 35 |
| Westmoreland, | 39 | 39 | 44 | 44 | 39 |
| Butler, | 36 | 36 | 36 | 42 | 36 |
| Venango, | 45 | 45 | 45 | 45 | 40 |
| Erie, | 35 | 35 | 40 | 35 | 30 |
| Allegheny, | 39 | 40 | 42 | 42 | 35 |
| Cambria, | 32 | 30 | 30 | 30 | 25 |
| Lawrence, | 28 | 33 | 36 | 33 | 25 |
| *Plumber.* | | | | | |
| Erie, | 30 | 30 | 30 | 30 | 30 |
| Venango, | 25 | 25 | 25 | 30 | 30 |
| Lackawanna, | 28 | 28 | 28 | 31 | 31 |

| | 1890. | 1891. | 1892. | 1893. | 1894. |
|---|---|---|---|---|---|
| *Painter.* | | | | | |
| Philadelphia, | 42 | 42 | 39 | 33 | 33 |
| Westmoreland, | 33 | 33 | 33 | 33 | 33 |
| Butler, | 25 | 35 | 35 | 28 | 23 |
| Venango, | 28 | 33 | 33 | 33 | 33 |
| Crawford, | 30 | 27 | 28 | 27 | 25 |
| Mercer, | 28 | 28 | 28 | 28 | 28 |
| Erie, | 25 | 25 | 25 | 25 | 31 |
| Blair, | 25 | 25 | 25 | 22 | 22 |
| Cambria, | 23 | 18 | 17 | 17 | 16 |
| Beaver, | 32 | 32 | 32 | 32 | 31 |
| Lackawanna, | 25 | 25 | 25 | 25 | 25 |
| Lycoming, | 23 | 23 | 23 | 23 | 25 |
| *Carpenter.* | | | | | |
| Philadelphia, | 44 | 44 | 38 | 38 | 35 |
| Allegheny, | 40 | 35 | 33 | 33 | 33 |
| Mercer, | 39 | 36 | 36 | 36 | 36 |
| Blair, | 33 | 30 | 30 | 28 | 30 |
| Cambria, | 30 | 28 | 28 | 25 | 25 |
| Westmoreland, | 33 | 33 | 33 | 28 | 28 |
| Butler, | 40 | 50 | 50 | 40 | 32 |
| Beaver, | 33 | 33 | 33 | 33 | 28 |
| Venango, | 28 | 31 | 28 | 28 | 28 |
| Crawford, | 25 | 22 | 22 | 23 | 23 |
| Erie, | 30 | 27 | 30 | 25 | 25 |
| Lackawanna, | 30 | 26 | 26 | 28 | 28 |
| Lycoming, | 25 | 26 | 35 | 40 | 25 |
| *Tinner.* | | | | | |
| Westmoreland, | 26 | 31 | 31 | 28 | 31 |
| Mercer, | 15 | 20 | 20 | 20 | 20 |
| Erie, | 25 | 25 | 25 | 25 | 35 |
| Blair, | 20 | 20 | 20 | 22 | 22 |
| Cambria, | 23 | 25 | 27 | 25 | 25 |
| *Slate-roofer.* | | | | | |
| Westmoreland, | 39 | 44 | 44 | 33 | 28 |
| Cambria, | 35 | 30 | 30 | 30 | 30 |
| Lawrence, | 18 | 20 | 25 | 25 | 28 |
| Beaver, | 17 | 17 | 17 | 25 | 25 |
| *Metal-roofer.* | | | | | |
| Philadelphia, | 36 | 37 | 37 | 37 | 37 |

The question may be asked, why should the rates differ so much? Are they caused by varying local demands, dissimilar conditions of living, or what is the reason? As the workingmen in one place know what wages are paid for similar labor in other places, one would suppose that in view of the easy and cheap modes of communication between them, those living in places where remuneration was lowest would go to places where the highest remuneration was paid; and thus in due time there would be an equalization of the rates. Of course, there may be many reasons why a working man should remain where he is—social surroundings, his ownership of a home, and other considerations of like character, and yet influences and causes of this kind do not affect all of them. Much has been written concerning the varying rates of wages in England, especially among agricultural laborers. The rates vary even in the adjoining counties. The differences in the rates paid by the farmers in the northern and southern counties of England are still more marked. But, on the other hand, these laborers are often ignorant of the varying conditions of remuneration, and even when they do know unhappily are too poor, in many cases, to take advantage of their knowledge and move to places where they could improve their condition.

But these things cannot be said of American workingmen in Pennsylvania. One of the consequences of establishing labor organiations, and, indeed, one of the reasons for establishing them, was to obtain information for the use of their members concerning these matters, and in truth the members do know quite as well, or better, than their employers what remuneration is paid everywhere throughout the State. Nevertheless, as the above table clearly shows, there is no uniformity in the rates, nor do they vary from year to year in the same manner. Doubtless the varying local demands explain some of the differences, but they do not wholly account for the variations. Another reason is that employers are disinclined to change rates unless the necessity for doing so clearly exists. Perhaps no prices on the whole remain as stable as those paid for labor, and so the varying rates exist, even within short distances and often where communication is easy and frequent.

Most of the persons engaged in the bricklaying trade of whom inquiry was made served two years, carpenters and plumbers three years, plasterers and stone-masons two years and the slate-roofers and tinners one year. It was ascertained, however, that many of the carpenters who work in the country had never served an apprenticeship.

Another question relates to the mode of acquiring knowledge of a trade, whether by serving an apprenticeship, or by acquiring the needful knowledge in technical schools. The remarks of the various classes of whom this inquiry was made show a great variety of

opinion. They will be found in another portion of the report, but some of the more important answers are given here.

The graduates of industrial schools that I have come in contact with have only one way of working and they do not wish to learn any other.

---

I favor training in an industrial school because boys get a theoretical as well as a practical education. And they get an education in other matters as well.

---

By being trained in an industrial school a boy does not have the opportunities to acquire the knowledge of his trade that an apprentice gets outside, as that is the correct plan. A boy working outside is thrown in contact with different journeymen, and learns the different ways of working.

---

I prefer the industrial school training because too much is expected from apprentices. They are obliged to do a great deal of work and no care is taken how roughly it is done, so that they are not allowed sufficient time to be taught properly.

---

I am of the opinion that all boys who wish to learn a trade should be regularly apprenticed; but I also think that they should be obliged to attend training school in the evenings, so that they might get the technical knowledge which is necessary to make a good workman, such as plans, drawing, mathematics, etc., as boys are sadly neglected in these matters. I am an Englishman and served seven years at my trade in England, and have only been in the country five and one-half years, and hardly like to obtrude my opinions.

---

I favor a preliminary training in a school, as I attended one, and I think I gained more theoretical knowledge than I could have acquired in the same time at actual work on buildings.

---

If a boy has the intention of starting in business for himself after he has acquired his trade, then he is better for a preliminary training in an industrial school, as he can get a knowledge of drawings, plans, etc. If not, he can learn more by actually working on buildings.

---

Apprentices from the industrial schools receive a time allowance, besides they understand the laying out of a building from plans. Master builders exact plenty of work from boys, but give them no instruction with regard to drawings or plans.

---

I am in favor of a preliminary training in an industrial school by all means, and any boy who wishes to learn bricklaying should first go one or more years to a training school, as he gets better mechanical ideas, and learns to work by scale and gets to understand plans, drawings, etc.

---

I favor an apprenticeship system as if the boy has any education he can learn more on the job. In the school he is taught to work

by plans. He is not taught that as an apprentice, that is all the difference.

---

A boy who has received a preliminary training in an industrial school, would be likely to have his ideas formed or fixed, and it would be a difficult thing to change them, so I must say that I prefer the regular apprenticeship system for teaching a boy this trade.

---

I favor a previous training in an industrial school, and then to finish as an apprentice. I commenced to work at bricklaying when I was thirteen years of age. If I could have gone to an industrial or training school for three or four years first, it would have greatly benefited me. I am glad to say though that the rules of the bricklayers' association in Philadelphia will not permit boys to be apprentices to the trade at so early an age and it is best so.

---

I am a retired bricklayer, and I served a regular apprenticeship of three years, but I would prefer a training in an industrial school as it would tend to increase the welfare of the boy who wishes to learn the trade.

---

I am a member of the Journeyman Bricklayers' Association of Philadelphia, and the idea that all members of that organization receive the same rate of wages is erroneous, as members may, and many do receive more than the regular fixed rate of wages. I always received more than the regular rate during the ten years I worked in Philadelphia which is evidence that the general opinion that such organizations bring all members on the same plane as regards the rate of wages is not founded on fact. The Williamson Free School of Mechanical Trades in Delaware county near Philadelphia, gives its students a good practical education in connection with trade work. Four trades are taught there, viz: bricklaying, carpentery, machinist and pattern-making, and architectural and mechanical drawing pertaining to the above trades is also taught. The boys who propose learning bricklaying and carpenter work are taught to draw complete plans of buildings and all important details connected therewith, also other structures such as boiler walls, stacks, etc. Calculating the cost of such structures is also a very important part of the education, and receives very careful attention.

---

I favor both systems, but I would like the boys from the schools to be subject to the journeymen's control so that the trade should not be overstocked.

The school gives the boy the opportunity of getting the technical part of the trade. The bosses like to get boys from the schools, as they are competent to do plain work at which sort of work they are kept during their term of apprenticeship. In some cases grown men who attend school for a year are put into the journeymen's society and then they call themselves bricklayers, but in fact they are nothing but botchers.

---

I think a two years' course in a school and a like term as an apprentice would be the best plan for a boy. My reasons are, that the school term would be a benefit, as some bosses are prone to keep the

boy on rough work during his whole term, and never give him a chance to learn the finer branches of the trade at all.

---

I favor training in an industrial school because matters pertaining to the trade are thoroughly explained to boys who attend them; whereas on a building no one has the time to devote to explanations.

---

I favor the apprenticeship system. I am a builder and my apprentices work beside me and are constantly under my eye.

In answer to the question, "Are apprentices employed at your trade?" I answer, yes, they are, but the trades unions dictate terms. There should be no necessity existing for trade schools nor would there be under an honest government, but dishonesty brings all sorts of necessities. This government seeks by a system which it calls protection to fill the country full of home markets which means a redundency of foreign labor. The workingmen, although they favor home markets take notice to fight this redundency by prescribing and hindering our native youth from learning trades, and then come trade schools to combat trade unions. Three kingdoms arrayed, one against the other.

---

I favor an apprenticeship system, as he receives practical knowledge. I am in favor of our American boys learning trades, because if we debar apprentices we will in a short time have to depend on foreign labor.

---

I favor the industrial school training, as the theory of the trade is taught them in the schools, and they make much better and brighter mechanics.

---

I favor both. I would have the boy spend a year in the school, and three years at actual apprenticeship in work on buildings.

---

I favor the apprenticeship system, as schools take the matter out of the hands of the master bricklayers. In my opinion the apprenticeship system should be regulated or conducted as follows: When a boy desired to learn the bricklaying trade or in fact any trade, he should go to work at it for a probationary period of say three months; then if his employer was satisfied that he would make a bricklayer, he should be regularly indentured, and be compelled under penalty of the law to serve his full time. In my opinion it is a poor plan to have a boy bound and compel him to work at a trade which he has no adaptability for, when he might make a good workman at some other trade.

---

I favor an apprenticeship of not less than four years. I have worked both with boys from the schools and regular apprentices, and the principal objection to boys from the schools, is that they think they know it all, and set themselves above men who have worked at the business for years. In fact they cannot be taught anything. I favor an apprenticeship system as better workmen are turned out under it.

I favor a preliminary training in an industrial or training school and some practical experience as an apprentice afterwards. My observation and experience warrants me in my belief.

---

I favor an apprenticeship system, as under it a boy gets more practical experience, which can be had only by working with journeymen on buildings. I acknowledge that a school training would be beneficial to a boy, as he would get the theoretical experience of drafting and working from plans, which unless he was apprenticed under a very careful and methodical master, he would never get at actual work, for in a general way a boy must, so to speak, pick up this trade himself by working with journeymen and watching their methods. The master is only interested in getting as much work out of the boy as he can. Of course there are exceptions.

---

I favor the school training, because a boy pupil gets a knowledge of architectural drawing and is capable of taking charge of building operations. The majority of apprentices who learn their trades on buildings never have an opportunity of seeing a drawing much less understanding it.

---

I favor both systems. About one year of a school term, and say three years at actual work outside, so that boys might become competent to do a day's work. I have worked with graduates from schools; they were good workmen but were too slow.

I prefer the industrial school training, as the boys get a better knowledge of the trade. At outside work if an apprentice is slow to learn, the boss will keep him carrying water and doing errands so that he never gets his trade properly.

---

I think the training schools are all right, but they work injury to poor boys who are anxious to learn the trade, and whose parents need their earnings. They cannot afford the time necessary to attend the schools, and school boys take the places as apprentices which in many instances journeymen are anxious to get for their sons.

---

I did not serve a regular apprenticeship, but after a term in an industrial school I went to work under instructions, or as an "improver," as it is known in the trade. I favor the school training, as the boys get the theoretical training and make better workmen.

---

I favor an apprenticeship combined with a good education. The reason for my opinions is founded on my experience of over twenty years at this trade, both in England and the United States.

---

I do earnestly favor an apprenticeship system, as I think that every American who wishes should have the opportunity of learning a trade, then our country would have mechanics of her own, and would not be obliged to depend so much on foreigners.

---

I favor the apprenticeship system before any other, as boys from the schools have to be taught everything over again when they leave to go as apprentices. In regard to other matters pertaining to our

trade I would say that there are about three thousand bricklayers in the city of Philadelphia. Now if the State government wishes to do something to promote the welfare of these men why does it not impose a duty or tax on foreign labor the same as it does on foreign products? There are numbers of men who come to this country in the spring, work at bricklaying until cold weather comes again, in the meantime living like animals, and then go back home to their own countries to live at ease until the next season comes around.

---

I favor the industrial schools, as boys who attend them have their ideas developed so that they may be better fitted to choose the occupation for which they are best adapted.

---

I favor both, as boys from the schools who become apprentices at this trade are equal to boys who have served two years at the trade on buildings.

---

I favor a training in a trade or industrial school, as in them a boy gets a chance to learn his trade which he will never get with a contractor, as he is driven too much and not given a chance.

---

I favor the two systems combined. The majority of the bosses prefer quantity to quality, in other words they want boys who can pile in the most bricks, and when a boy is through in the school he must go to work on a building to become proficient.

---

I favor both systems. Training in an industrial school first, to learn the uses of tools and the theoretical part of the trade; then the practice on the buildings afterwards. In answer to question seventeen, I would say that the introduction of foreign labor has hurt us more than the introduction of machinery.

---

I favor both. I consider that a boy should have one year's training in an industrial school where he will get a rudimentary education in the trade, also a knowledge of architectural drawing, the use of tools, etc., then two years of actual work on buildings. These systems combined turn out better and more competent and intelligent mechanics than a separate course in a trade school, or one entirely upon a building. This has been in operation for some time in Philadelphia and has proven entirely satisfactory.

---

I favor an apprenticeship system. As the trade, as a rule, will not recognize a graduate from industrial schools nor make allowance for the time spent in them, and in my opinion a trade school graduate gets the practical knowledge in a school which is necessary to make a good mechanic.

---

I favor a training in the schools, so that American boys may get good educations and be preferred at work to foreigners who seem to get the best chance for jobs now.

The answers to the questions asked in your blank which you will receive from numbers of our craft will be in many instances incorrect. I mean as to the earnings of bricklayers. The business

at best is a precarious one, as, for example, in the winter months and frequently until April, work is very generally suspended on account of frost. Of course, some buildings are erected in winter, but work is done only in the warmest hours of the day. During the summer and autumn months we are compelled to lose time from a number of causes, such as waiting for material, not only of our own, but window frames, iron, stone, etc.; and last though not least for rainy weather. The larger firms as a rule keep a few of their older hands steadily employed on jobbing work, but those so employed are of the fortunate ones.

I wish to say, however, that after an experience of twenty-five years at the business I do not believe it possible for a bricklayer in the vicinity of Philadelphia, no matter how industrious and sober he may be, to work more than seven months or in working days say one hundred and eighty-two. This of course applies to what we would term a very good season for building. In answer to the questions about apprenticeships, I would say that in my experience the best specimens we have had from those schools have been conspicuous as failures.

---

I favor the industrial school training. These schools are of great advantage to boys wishing to learn this trade, because there are matters pertaining to the trade which are taught in the schools that no one would take the time to show or explain to boys under the regular apprenticeship system.

---

Both systems are good, but there should be some law to oblige or compel a master to give the apprentice instruction in the theoretical parts of the trade, because as business is conducted now, the boy is driven to such an extent, that he does not have the opportunity to get his trade correctly.

---

I believe in an indentured apprenticeship system. Schools seem to give boys a sort of an idea or outline of the business and then the majority of the boys think they know it all and they go around from one employer to another and the employers take advantage of them to the detriment of skilled workmen.

---

I favor the apprenticeship system, as there are too many men now with swelled heads who think they know it all. There is one great fault though with the apprenticeship system, as some bosses use their apprentices more for the purpose of making all they can off the boys' work, and do not take any interest in the way of trying to make good workmen of them.

---

I favor the industrial school system, as in my opinion boys are taught better and more thoroughly, and are not subject to the temptations in the way of learning to drink intoxicating liquor, etc., that they would be under a boss plasterer.

---

Training in the industrial schools might do very well if it were all plain work that we had to do. But for all around work a boy must serve a regular apprenticeship and learn with journeymen.

In the blank sent to me, you ask for information in regard to mechanics employed in the building trades. In the first place, steady employment in the plastering business, except in some isolated cases, is a thing unknown, for very few employers have work for their men in the winter months, and the number of plasterers is too great for the work to be done at any time except in very good seasons. This state of affairs is not due to too many apprentices being taught the business, but because of the foreign workmen in this and other large cities who seem to be looked upon with great favor by the employers; and who seem to be given work in preference to men born and reared in this country.

They seem to be used as a standing menace to organized labor. You may ask what remedies I would propose? I answer that there are several. First and most important I would suggest than emigration should be restricted, for as I have said before, there are too many men in all the large cities now for the work which is to be had, and I am in favor of American boys being encouraged to learn trades so that after having served a faithful apprenticeship, they may have the opportunity of earning a livelihood and not be turned adrift to make places for men from foreign countries. It makes a young man wonder if all he reads and hears about this great and glorious country can be true. These are not the sore head utterances of an anarchist or socialist, but the result of reading and thinking by an American mechanic whose ambition is to better his condition by steady work with fair wages.

---

I favor the apprenticeship system, but do not favor training in industrial schools. My reason is that the apprentice who learns his trade with journeymen makes the best workman.

---

I believe in the apprenticeship system, but the apprentice, to be a competent workman, should have a term in a school where draughting is taught. An apprentice gets the experience without which he cannot become a good workman.

---

I favor an apprentice system, as the industrial schools seem to bring more hands into an already overburdened trade, and a boy to get this trade properly, should have all the practical experience he can get.

---

I do not favor the industrial school training, because in those schools they simply get the theoretical part and as of course their instructor is disposed to think that his plans and ideas are correct, why naturally the boy thinks so as well.

I was at one time foreman for a large builder and had a boy under me who had graduated from an industrial school and he knew a great deal more than I did, the very first day he commenced, that is to say, he imagined he did, and when I would direct him to do a piece of work in a certain way, he would tell me that that was not the way he was taught in school to do it, and we had to get rid of him.

I favor both systems, as I attended the Master Builders' Trade School for nine months, then served as an apprentice with a master builder for two years; now I am in business for myself.

---

I favor both systems. But if we had an apprenticeship system in this business such as the bricklayers in Philadelphia have, it would be a great improvement, and a benefit to both the master and apprentice, as the boy could not leave his employer without cause, and get work as a journeyman elsewhere.

---

I favor the industrial school training, as I attended one, and afterwards served two years as an apprentice. I think the school training the most expeditious plan for a boy to get the knowledge of the trade.

---

I do favor a rigid apprenticeship system, and I assert that the abandoning of it has been the ruination of this trade. A trade can be acquired better by a boy when he is taught by a practical mechanic, and at different kinds of work.

---

I favor the industrial school training, because a boy who is apprenticed, and shows an aptitude for a particular part or branch of this trade, is usually kept at that and learns nothing else.

---

I favor a good apprenticeship system. I have worked with several painters who were taught in industrial schools, and there was not a good practical painter among them, for in the schools they cannot be taught the stern realities of the trade as they do not work out in the weather. But why more painters? There are a great many more now than can find steady employment in this city, and the hours of labor must be reduced before there will be more apprentices or painters actually needed.

---

I favor a school training; that is to say, a preliminary training, as it teaches a boy how to use his tools and prevents a great waste of material. Boys when first apprenticed to this trade waste a great quantity of paint.

---

I favor the industrial school training, if it can be afforded, because a boy gets a better knowledge of the technical part of his trade, and he can learn the practical parts by working at it.

---

A training in an industrial school is all right, but a regular apprenticeship is better, and if a boy can get both, it is best of all; but it is absurd to imagine that a school training alone will make a boy master of his trade.

---

I favor some system that would guarantee a supply of good mechanics. It seems to me that this business is crowded with men who have not served more than six months at the business and one man who is thoroughly skilled, is made to work with about six of these "handy-men," as they are termed.

I favor an apprenticeship, for under it a boy has a better opportunity to learn, as he gets different ideas from different men. The average yearly time made by journeymen in this business is from seven to eight months, as we have to lose all wet or stormy weather. The wages range from $2.25 to $3.25 per day.

---

I favor an industrial school training, as it adds to the efficiency of a mechanic by making him more independent of others, and better calculated to get ahead.

---

I don't know anything about training or industrial schools, but I am compelled to say that the apprenticeship system is not perfect by any means, nor does it aim at perfection.

A builder takes a strong young man who wishes to be a carpenter, and keeps him at the branch of the business that he seems best adapted to, and takes no further care of his interests or advancement, and if the boy is not intelligent and apt in picking up the trade himself, he is not likely to know much about it when his time expires.

---

I favor the industrial school training, for as far as my judgment goes, and from what I have seen, it is best. My reasons are that the employer generally keeps the apprentice employed at driving wagon, doing errands, digging post-holes, tending bricklayers, and making a general roust about of him, and depriving him of the practical knowledge of the trade which he should be getting in the limited time of his apprenticeship.

---

I favor both systems. Industrial schools give boys theoretical education and instruct them in the reading and use of plans and architectural drawings, which knowledge is of great use to them during their futnre experience as apprentices and journeymen.

---

I favor an industrial school training. My reasons are that as there are no restrictions placed on apprentices, there is nothing to prevent them after they have served a year or so, from leaving their masters and going to work as journeymen elsewhere.

---

In regard to the apprenticeship system, much depends on the master. In my experience very little attention is given to boys in teaching them the practical parts of the trade, as they are usually kept at the rough laboring work, such as carrying material, lumber, etc.

---

An industrial school training is what I favor. An apprentice does not receive the care that he should nowadays, as he is kept only on such work as he can earn the most money at for his master. When the boy feels that he can do a man's work, he can leave his master if he so desires, and although not half instructed, can get work elsewhere as a journeyman.

---

I favor the industrial school training, as far as possible. My reason is, that by a preliminary course in a school there will not be so many inferior workmen in the labor market.

I favor the apprenticeship system. A boy may learn the minor technicalities of the trade in an industrial school. I think they commence at the wrong end, as in my opinion a term at an industrial school would be beneficial after a boy had served his apprenticeship.

---

Both systems are good, and schools should be encouraged, but if a boy's parents cannot afford to send him to an industrial school, why I prefer the apprenticeship system; as to be a good mechanic, a boy must have actual practice in handling tools, otherwise he never will be any other than a cheap workman.

---

I favor apprenticeship, as in my experience I find that regular apprentices turn out to be the best workmen. I have traveled over the United States for the past nine years and before 1894, I had no trouble in finding employment.

This trade is ruined by botchers, as it seems that if a man fails in any other business, he gets himself a saw and hatchet and gets employment as a carpenter.

I haveknown contractors to have ten to twelvehands employed, and not more than two or three of them had ever served a day's apprenticeship to the trade. This has been the means of getting our trade into the deplorable condition in which it now is.

---

I favor the apprenticeship system if strictly carried out. The greatest trouble in the building trades in this section, is to get the money after it is earned; as the employers wish to pay in store orders, which obliges us to pay two prices for our goods. And again a great many of the contractors do not own any property and if they are dishonest we are likely to lose the greatest part of our wages. The mechanics' lien law as it is called, seems to be all in favor of the contractor and the parties who furnish the material get the money and the mechanic gets nothing but promises.

---

I certainly favor the apprenticeship system. In the sash mill where I am employed, boys are running machinery for one dollar per day. In 1890 mechanics were paid $2.25 to $2.50 for the same work.

---

I favor either an apprenticeship system or an industrial school training and if I could have my way I would not work with a man who had not served an apprenticeship nor would I employ one. The reason why there are not better mechanics now is because boys say that it does not pay them to apprentice themselves to this trade as they can get better wages as contractors' laborers, and pick up a knowledge of the trade as they go along.

---

A boy could attend school until he was grey and he would not learn to work, because he must have practice at actual work.

You will admit that there can be more knowledge gained by traveling than from reading books of travel, and it is the same case with this trade.

I favor industrial school training. My reason is that boys so instructed become more intelligent workmen by being trained in the theory as well as the practice.

---

I am in favor of the apprenticeship system. I cannot speak for training or industrial schools as I have never been in one, nor have I ever worked with any of the graduates of them. I think a boy should serve an apprenticeship of at least three years to become a competent carpenter. I, for all I am a journeyman carpenter, favor ten hours for a day's work for I can not see how an employer can be expected to pay ten hours wages for eight hours work. I also think that wages should be paid every week in cash or at the furthest semi-monthly. The apprenticeship system as it is now in force is simply no system at all, as young men here are not taking any interest in it whatever. A boy will go to work at this trade without any indenture and will want journeyman's wages the first year. In about the second year he will start out as a mechanic. This state of affairs results in American boys being only what are termed "chunkers," and the Germans and other foreigners who have served a regular apprenticeship to the trade are made foremen and bosses. I believe the industrial schools will be a success in turning out boys, who after a term at outside work will be first class carpenters.

---

I believe in a boy showing some natural inclination for a trade before he is put at it as an apprentice. Then it makes no difference whether he serves a regular apprenticeship or attends an industrial school, he will make a mechanic. If he has no such inclination he will be a "stick" in whatever trade he tries to learn.

---

I favor an apprenticeship system, and a rigid one, such as the old indenture system was. The industrial and training schools turn out more by half than there are turned out under the apprenticeship system, and they do not make as good mechanics.

I favor the industrial school training. My reason is that contractors take apprentices and keep them doing laborers' work and teach them absolutely nothing about the trade.

When his time has nearly expired, the plan is for the employer to start a quarrel with the boy, and send him adrift without a knowledge of his trade, and in many cases broken in health by the hard work he has been forced to do.

---

I am in favor of the apprenticeship in an industrial school, as I am of the opinion that they are better fitted for the trade if taught in that way than by the so called apprenticeship system as it is in vogue now.

---

I would favor an apprenticeship system say of about one apprentice to ten journeymen, then boys so taught would become better mechanics, as it is now a boss may have half a dozen apprentices and none of them will be taught his trade properly. I would favor a strict law to be enacted governing the apprenticeship system; that the term should not be for less than four years, and there should be an indenture binding alike upon the boy and his master, and that the boy should be at least seventeen years of age at the com-

mencement of his term. This system with a reduction of the hours of labor to eight a day, and State arbitration for all labor troubles. These changes would in my opinion result in great good to men in every trade.

---

I favor the industrial school training, so that the boy may get an education along with the trade. A man to be a first-class carpenter should know something of mathematics, geometry and the use of plans and drawings.

---

I favor the industrial school training. My reason being that the school would develop a better grade of workmen. There are too many incompetent men now, who are willing to work for any wages they can get. Carpenters in this section receive lower wages than men in any other of the building trades, and they are at a greater expense for tools, etc. This state of affairs might be remedied if men were required to have a complete knowledge of the trade before they were permitted to work at it.

---

I am in favor of the industrial school training because the majority of contractors will take boys as cheaply as they can get them, and in a year they are called carpenters and their employers pay no heed as to whether they are learning anything or not. I have been a foreman for contractors and I know whereof I speak. I want some system whereby we can have first-class workmen that can do any work in this trade that they are put at.

---

I favor the training schools, because the majority of employers just start the boys out to work with journeymen that neither know nor care how they get along, and so the boys are left to work their own way and never become skilled workmen.

---

The building trade can be taught best on buildings where the work is and good material used. As an apprentice should be taught all about the composition of the material used in his trade.

The greatest detriment to both the bricklayer and his employer is the handy saloon, as if we are at work, and a shower comes up a great many of the men resort to the nearest saloon and if after an hour or so the weather clears again either the bricklayer or hod carrier is not fit to go to work and the rest of the day is lost. These people, as a general thing, are the loudest in condemnation of the wages they receive.

---

I favor a four years' apprenticeship term, after a course in an industrial school to learn drafting, etc. If that term of apprenticeship was insisted on there would not be so many so called mechanics who are willing to work for any wages they can get.

---

I favor the industrial school training. My reasons are that in the present loose apprenticeship system it is the only means by which boys can be made good mechanics which in time will result in doing away with the "Jacks" in the trade.

I favor an apprenticeship of from three to four years. Two-thirds of mechanics in this business only get half a trade by reason of their not serving half of their apprenticeship term, and never having had training on good work.

---

I favor an industrial school training. My reasons are that apprentices are frequently taken by men to learn plastering who themselves are not masters of the trade, and it is to be presumed that at the schools, a man must be a master of the business before he can receive an appointment as an instructor.

---

I favor both systems. The schools cannot give the pupils instruction in some branches of the trade that a carpenter must know; so a certain term of apprenticeship under a skillful foreman is absolutely necessary.

---

I favor an apprenticeship system as I do not think it is possible for a boy to get a thorough knowledge of carpentry in all of its branches in an industrial or training school. A man to be a competent carpenter must understand all sorts of repairing as well as the great variety of new work which is done on a building. An apprenticeship system which would require a certain degree of skill and a strict apprenticeship law which would compel boys to serve a full term as apprentices before they could procure work as journeymen, and also that would compel the master to give the apprentice opportunities of working at all the branches of the trade, would remedy this.

---

I favor the apprenticeship system if boys are compelled to serve not less than three years under a rigid indenture and a first-class instructor, otherwise I favor the industrial schools.

---

I favor the school system, as under it there will not be so many "would be" mechanics. I presume that the schools give boys who graduate some sort of a certificate of proficiency, whereas, under the present apprenticeship system, which is in reality no system at all, boys can work a year at the trade and then set up for journeymen, as they imagine they know it all.

---

I favor the industrial schools. My reasons are that apprentices learn but little under the present system as employers, for the most part care nothing about whether the boy is being properly instructed or not, their only solicitude is the amount they can make out of his labor. The journeyman is supposed to teach the boy, and as he gets nothing for it, as a general thing he does not care whether the apprentice learns anything or not, so that it is very little that the boy learns.

---

There are apprentices employed in this trade here but very few of them serve their full term. I would like to have a law enacted that

would compel a boy to serve his full time, and that no man should be employed as a mechanic unless he had a certificate or diploma showing that he had done so. Then we would have good mechanics who would command good wages.

---

I favor the apprenticeship system. My reasons being that a boy having attended a school and been taught the theoretical part of the business, would not take kindly to the practical part, and without that he could not expect to become a master builder or even a competent journeyman.

---

I favor the preliminary training in an industrial school, providing the boy afterwards gets a course or term at actual work under the teaching of practical mechanics. The majority of boys who go as apprentices to this trade serve only from one to two years, and then think they know it all and set themselves up for mechanics.

I am greatly in favor of the training schools as a boy gets thoroughly instructed in the use of plans as well as tools and to be quick and correct at figures.

---

I would favor an industrial school training. My reasons are first, there is not enough of variety of work in this vicinity to do an apprentice justice, so I think the school would be the proper place; as to get a diploma or certificate he would be obliged to stay his full term. If I, as a contractor, would take an apprentice to teach him the trade, I would be fortunate if he were not in the business of contracting in about his second year, and I would have no remedy.

---

I favor the industrial school training because it gives every boy an equal chance with the others. Causes and effects are taught in them and I presume the system of mixing paints is also taught, which certainly is not taught by employers outside.

---

The introduction of labor-saving machinery is playing an important part in changing the apprenticeship system. This subject was fully considered in the report of this bureau last year. (See Part D, Apprenticeship and Industrial Schools.) Fewer persons acquire a complete knowledge of a trade, nor do they regard a long term of apprenticeship necessary. In many cases some knowledge is acquired without serving a regular apprenticeship, and work is obtained. This is more especially the case outside the cities.

---

Another important question relates to the regularity of employment. Those engaged in the building trades are, perhaps, among the worst sufferers from irregularity of employment. When the winters are severe construction is less active and consequently involuntary idleness is more general. When the winters are mild, then the opposite condition of things prevails. Construction is also affected very seriously by the times. At some periods, especially in our large cities, the building of houses is very active. In Philadelphia, for example, 4,482 buildings costing $26,407,830 were built in

1890, while during the four succeeding years the number built and the cost of same were as follows:

1891, No. of buildings 4,272, cost $20,008,236.
1892, No. of buildings 4,584, cost 26,826,859.
1893, No. of buildings 4,236, cost 23,483,397.
1894, No. of buildings 5,540, cost 22,189,664.

---

A table is given showing the average periods of non-employment of the different classes of working men from whom returns were obtained.

*Table of Non-employment by Months, 1890–4.*

| | | 1890. | | | | | | | | | 1891. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | *Painter.* | | | | | | | | | | | | | | | | | | |
| | Philadelphia, | 30 | 5 | 9 | 3 | 4 | 6 | 1 | 2 | ... | 32 | 6 | 5 | 5 | 7 | 7 | 2 | ... | ... |
| 2 | Westmoreland, | 9 | 2 | 2 | 2 | 2 | ... | 1 | ... | ... | 11 | ... | 2 | 5 | 1 | 1 | 2 | ... | ... |
| | Butler, | 4 | ... | 1 | 1 | 1 | 1 | ... | ... | ... | 3 | ... | 1 | ... | 1 | 1 | ... | ... | ... |
| 4 | Venango, | 7 | 1 | ... | 1 | 1 | 1 | 1 | 2 | ... | 7 | 1 | ... | ... | 1 | 2 | 1 | 2 | ... |
| 5 | Crawford; | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | ... | ... | ... | ... |
| 6 | Mercer, | 9 | 1 | ... | 1 | 4 | 1 | ... | 2 | ... | 11 | 1 | 1 | 1 | 4 | 2 | ... | 2 | ... |
| 7 | Erie, | 7 | 4 | ... | 1 | 1 | 1 | ... | 1 | ... | 8 | 4 | ... | 2 | 1 | 1 | ... | ... | ... |
| 8 | Blair, | 4 | ... | 1 | 1 | 1 | ... | 1 | ... | ... | 5 | 1 | 1 | ... | 1 | 2 | ... | ... | ... |
| 9 | Cambria, | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | ... | ... | ... | ... |
| 10 | Beaver, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 11 | Lackawanna, | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | ... |
| 12 | Lycoming, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | *Tinner.* | | | | | | | | | | | | | | | | | | |
| 1 | Westmoreland, | 3 | ... | 1 | ... | 2 | ... | ... | ... | ... | 4 | 1 | ... | 1 | 1 | 1 | ... | ... | ... |
| 2 | Mercer, | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... |
| 3 | Erie, | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... |
| 4 | Blair, | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... |
| 5 | Cambria, | 2 | 1 | ... | ... | ... | 1 | ... | ... | ... | 2 | 1 | ... | ... | ... | 1 | ... | ... | ... |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Slate-roofer.* | | | | | | | | | | | | | | | | | | |
| | Westmoreland | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | 2 | ... | ... | 1 | 1 | ... | ... | ... | ... |
| 2 | Cambria | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | ... |
| 3 | Lawrence | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | ... |
| 4 | Beaver | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... |
| | *Plumber.* | | | | | | | | | | | | | | | | | | |
| 1 | Erie | 9 | 6 | 2 | ... | ... | 1 | ... | ... | ... | 10 | 7 | 2 | 1 | ... | ... | ... | ... | ... |
| 2 | Venango | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... |
| 3 | Lackawanna | 3 | 3 | ... | ... | ... | ... | ... | ... | ... | 4 | 4 | ... | ... | ... | ... | ... | ... | ... |
| | *Metal-roofer.* | | | | | | | | | | | | | | | | | | |
| 1 | Philadelphia | 40 | 23 | 1 | 8 | 4 | 3 | ... | 1 | ... | 42 | 22 | 6 | 7 | 4 | 2 | ... | 1 | ... |
| | *Stone-mason.* | | | | | | | | | | | | | | | | | | |
| 1 | Beaver | 11 | 2 | ... | ... | 3 | 1 | 3 | 2 | ... | 10 | 2 | ... | ... | 2 | ... | 2 | 4 | ... |
| 2 | Mercer | 11 | 1 | ... | ... | 3 | 5 | 1 | 1 | ... | 11 | 1 | ... | ... | 5 | 2 | 2 | 1 | ... |
| | Blair | 7 | 1 | ... | ... | 2 | 1 | ... | 2 | 1 | 7 | 1 | ... | ... | 4 | ... | ... | 1 | 1 |
| 4 | Westmoreland | 8 | 1 | 1 | 1 | 2 | 1 | ... | 2 | ... | 9 | 2 | ... | 1 | 2 | 1 | 1 | 1 | 1 |
| 5 | Butler | 3 | ... | ... | ... | ... | 1 | ... | 1 | 1 | 4 | ... | ... | ... | ... | 1 | ... | 1 | 2 |
| | Venango | 6 | 1 | ... | ... | 1 | ... | 1 | 2 | 1 | 6 | 1 | ... | ... | 1 | ... | 1 | 2 | 1 |
| 7 | Erie | 2 | ... | ... | 1 | 1 | ... | ... | ... | ... | 3 | ... | ... | 2 | 1 | ... | ... | ... | ... |
| 8 | Allegheny | 6 | ... | ... | ... | 3 | 3 | ... | ... | ... | 5 | ... | ... | 1 | 2 | 1 | 1 | ... | ... |
| 9 | Cambria | 3 | ... | ... | ... | 1 | 2 | ... | ... | ... | 4 | 1 | ... | ... | 1 | 2 | ... | ... | ... |
| 10 | Lawrence | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | 1 | ... | ... | ... | ... | ... |
| | *Carpenter.* | | | | | | | | | | | | | | | | | | |
| 1 | Philadelphia | 54 | 20 | 9 | 7 | 9 | 7 | ... | 2 | ... | 56 | 19 | 10 | 10 | 9 | 5 | 1 | 2 | ... |
| 1 | Allegheny | 16 | 8 | 2 | 2 | ... | 2 | 1 | 1 | ... | 17 | 7 | 1 | 3 | 2 | 2 | ... | 2 | ... |
| 3 | Mercer | 24 | 6 | 2 | 2 | 6 | 3 | 1 | 3 | 1 | 25 | 4 | 4 | 2 | 5 | 7 | ... | 2 | 1 |

## *Table of Non-employment by Months, 1890–4*—Continued.

| | | 1892. | | | | | | | | | 1893. | | | | | | | | | 1894. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | *Painter.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Philadelphia, | 33 | 5 | 8 | 4 | 6 | 9 | .. | 1 | .. | 35 | 5 | 8 | 5 | 5 | 9 | 1 | 1 | 1 | 42 | 8 | 13 | 10 | 3 | 3 | 4 | 1 |
| 2 | Westmoreland, | 13 | .. | .. | 7 | 2 | 2 | 1 | 1 | .. | 18 | 2 | 3 | 4 | 4 | 2 | 1 | .. | 2 | 19 | 2 | 4 | 3 | 6 | .. | 3 | 1 |
| 3 | Butler, | 4 | .. | 1 | .. | 1 | 2 | .. | .. | .. | 4 | .. | .. | 1 | 1 | 1 | .. | 1 | .. | 4 | .. | .. | 1 | 3 | .. | .. | .. |
| 4 | Venango, | 7 | 2 | .. | .. | . | 3 | .. | 2 | .. | 9 | 2 | .. | 1 | .. | 2 | 1 | 3 | .. | 10 | .. | 1 | 1 | 2 | 3 | .. | 3 |
| 5 | Crawford, | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | .. | .. | .. | 2 | .. | .. | .. |
| 6 | Mercer, | 11 | 1 | 1 | .. | 5 | 2 | .. | 2 | .. | 12 | 1 | 1 | 1 | 4 | 2 | 1 | 2 | .. | 12 | 1 | 1 | .. | 9 | .. | .. | 1 |
| 7 | Erie, | 8 | 5 | .. | 1 | 1 | 1 | .. | .. | .. | 9 | 3 | 2 | .. | 1 | 2 | .. | 1 | .. | 10 | 6 | 1 | 2 | .. | 1 | .. | .. |
| 8 | Blair, | 5 | 1 | 1 | .. | 3 | .. | .. | .. | .. | 5 | .. | 1 | .. | 3 | 1 | .. | .. | .. | 7 | .. | 1 | .. | 4 | .. | 2 | .. |
| 9 | Cambria, | 1 | .. | 1 | .. | .. | .. | . | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. |
| 10 | Beaver, | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | 2 | .. | .. | .. | 1 | .. | .. | 1 |
| 11 | Lackawanna, | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | .. | 1 | 1 | .. | .. | .. | .. |
| 12 | Lycoming, | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. |
| | *Tinner.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Westmoreland, | 4 | 1 | .. | 1 | 2 | .. | .. | .. | .. | 4 | .. | .. | .. | 3 | .. | .. | .. | 1 | 4 | .. | .. | .. | 2 | 2 | .. | .. |
| 2 | Mercer, | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | 1 | 1 | .. | .. | .. |
| 3 | Erie, | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | .. | .. | .. | .. | .. | .. |
| 4 | Blair, | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. |
| 5 | Cambria, | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Slate-roofer.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Westmoreland, | 2 | .. | .. | 1 | 1 | .. | .. | .. | .. | 2 | .. | .. | 1 | 1 | .. | .. | .. | .. | 2 | .. | .. | 1 | .. | .. | .. | 1 |
| 2 | Cambria, | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. |
| 3 | Lawrence, | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | 2 | .. | .. | .. | 1 | .. | 1 | .. |
| 4 | Beaver, | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. |
| | *Plumber.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Erie, | 12 | 10 | 1 | 1 | .. | .. | .. | .. | .. | 16 | 9 | 5 | 1 | 1 | .. | .. | .. | .. | 13 | 9 | 2 | 1 | 1 | .. | .. | .. |
| 2 | Venango, | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | 1 | .. | .. | .. | .. | .. | | 1 | 1 | .. | .. | .. | .. | .. |
| 3 | Lackawanna, | 5 | 5 | .. | .. | .. | .. | .. | .. | .. | 5 | 5 | .. | .. | .. | .. | .. | .. | .. | 6 | 5 | .. | 1 | .. | .. | .. | .. |
| | *Metal-roofer.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Philadelphia, | 46 | 25 | 3 | 10 | 2 | 4 | .. | 2 | .. | 47 | 25 | 3 | 10 | 4 | 3 | 1 | 1 | .. | 50 | 24 | 4 | 6 | 8 | .. | 3 | 5 |
| | *Stone-mason.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Beaver, | 10 | 2 | .. | .. | 3 | .. | 1 | 4 | .. | 9 | 2 | .. | .. | 2 | .. | 1 | 1 | 3 | 9 | 1 | .. | .. | 4 | 4 | .. | .. |
| 2 | Mercer, | 12 | 2 | .. | .. | 3 | 5 | 1 | 1 | .. | 12 | 1 | .. | 1 | 5 | 4 | .. | 1 | . | 13 | 1 | .. | 1 | 5 | 2 | 3 | |
| 3 | Blair, | 9 | 1 | .. | .. | 5 | 2 | .. | 1 | .. | 12 | 1 | .. | .. | 6 | 1 | .. | 2 | 2 | 12 | 1 | 2 | .. | 3 | 5 | 1 | .. |
| 4 | Westmoreland, | 9 | 3 | .. | 2 | .. | 1 | 1 | 2 | .. | 9 | 3 | .. | .. | 2 | 1 | 1 | .. | 2 | 9 | .. | 1 | 1 | 1 | 3 | 1 | 2 |
| 5 | Butler, | 5 | .. | .. | .. | .. | 1 | .. | 2 | 2 | 3 | .. | .. | .. | 1 | .. | .. | 1 | 1 | 7 | .. | .. | 1 | 4 | 1 | .. | .. |
| 6 | Venango, | 6 | 1 | .. | .. | 1 | .. | 2 | 2 | 1 | 5 | 1 | .. | .. | 1 | .. | .. | 2 | 1 | 5 | 1 | .. | .. | 2 | 1 | .. | 1 |
| 7 | Erie, | 3 | .. | 1 | 1 | 1 | .. | .. | .. | .. | 3 | .. | .. | 2 | 1 | .. | .. | .. | .. | 3 | 2 | .. | .. | 1 | .. | .. | .. |
| 8 | Allegheny, | 6 | .. | 1 | .. | 3 | 2 | .. | .. | .. | 9 | 1 | 1 | 2 | 3 | 1 | .. | 1 | .. | 9 | .. | .. | 3 | 2 | 2 | 2 | .. |
| 9 | Cambria, | 4 | 1 | .. | .. | 1 | 2 | .. | .. | .. | 4 | 1 | .. | .. | 1 | 2 | .. | .. | .. | 3 | 1 | .. | 1 | 1 | .. | .. | .. |
| 10 | Lawrence, | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. |
| | *Carpenter.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Philadelphia, | 56 | 21 | 8 | 11 | 7 | 8 | .. | .. | 1 | 63 | 18 | 8 | 12 | 7 | 10 | 2 | 6 | .. | 76 | 18 | 16 | 14 | 17 | 2 | 5 | 4 |
| 2 | Allegheny, | 17 | 8 | 2 | 4 | .. | 2 | .. | .. | 1 | 15 | 8 | 1 | 1 | 1 | 2 | 1 | 1 | .. | 18 | 4 | 2 | 1 | 5 | 1 | 2 | 3 |
| | Mercer, | 26 | 4 | 3 | 4 | 6 | 6 | 2 | 1 | .. | 28 | 5 | .. | 8 | 4 | 7 | 2 | 2 | .. | 29 | 5 | 1 | 3 | 6 | 7 | 6 | 1 |

*Table of Non-employment by Months, 1890–4*—Continued.

| | | 1890. | | | | | | | | | 1891. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4 | Blair, | 37 | 10 | 4 | 2 | 12 | 8 | 1 | ... | ... | 41 | 9 | 5 | 5 | 12 | 6 | 2 | 2 | ... |
| 5 | Cambria, | 22 | 12 | 2 | 2 | 2 | 3 | ... | 1 | ... | 21 | 12 | 2 | 2 | 2 | 2 | 1 | ... | ... |
| 6 | Westmoreland, | 13 | 7 | 2 | 2 | 1 | 1 | ... | ... | ... | 14 | 7 | 3 | 1 | ... | 3 | ... | ... | ... |
| 7 | Butler, | 13 | 10 | 2 | 1 | ... | ... | ... | ... | ... | 14 | 11 | 2 | 1 | ... | ... | ... | ... | ... |
| 8 | Beaver, | 14 | 5 | 3 | 1 | 1 | 1 | 1 | 2 | ... | 15 | 7 | 3 | 1 | ... | 2 | ... | 2 | ... |
| 9 | Venango, | 12 | 5 | ... | 1 | 5 | ... | ... | 1 | ... | 12 | 7 | ... | ... | 4 | 1 | ... | ... | ... |
| 10 | Crawford, | 3 | 1 | ... | ... | 2 | ... | ... | ... | ... | 3 | 1 | ... | ... | 2 | ... | ... | ... | ... |
| 11 | Erie, | 2 | 1 | 1 | ... | ... | ... | ... | ... | ... | 3 | 2 | 1 | ... | ... | ... | ... | ... | ... |
| 12 | Lackawanna, | 8 | 6 | 1 | 1 | ... | ... | ... | ... | ... | 9 | 7 | ... | 2 | ... | ... | ... | ... | ... |
| 13 | Lycoming, | 10 | 5 | 1 | 1 | 2 | 1 | ... | ... | ... | 11 | 4 | ... | 2 | 2 | 3 | ... | ... | ... |
| | *Plasterer.* | | | | | | | | | | | | | | | | | | |
| 1 | Philadelphia, | 54 | 7 | 5 | 9 | 16 | 10 | 2 | 4 | 1 | 63 | 7 | 4 | 14 | 23 | 8 | 4 | 2 | 1 |
| 2 | Mercer, | 2 | ... | ... | ... | 1 | 1 | ... | ... | ... | 3 | ... | 1 | 1 | 1 | ... | ... | ... | ... |
| 3 | Blair, | 8 | 3 | 2 | ... | 3 | ... | ... | ... | ... | 9 | 4 | 2 | ... | 1 | 1 | ... | ... | 1 |
| 4 | Westmoreland, | 2 | ... | ... | ... | ... | ... | ... | 2 | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... |
| 5 | Butler, | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 1 | ... | ... | ... | 1 | ... |
| 6 | Venango, | 2 | ... | 1 | ... | ... | ... | ... | 1 | ... | 2 | ... | 1 | ... | ... | ... | ... | ... | 1 |
| 7 | Crawford, | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... |
| 8 | Erie, | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | ... | ... | ... | ... |
| 9 | Lycoming, | 4 | 1 | 1 | ... | ... | 2 | ... | ... | ... | 5 | 1 | ... | ... | 1 | 2 | ... | 1 | ... |

| | *Bricklayer.* | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Philadelphia, | 413 | 85 | 24 | 50 | 99 | 97 | 23 | 29 | 1 | 435 | 77 | 31 | 52 | 113 | 106 | 17 | 34 | 5 |
| 2 | Allegheny, | 22 | ... | 4 | 4 | 7 | 6 | 1 | ... | ... | 20 | ... | 2 | 4 | 4 | 7 | 3 | ... | ... |
| 3 | Beaver, | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | ... |
| 4 | Mercer, | 2 | ... | ... | ... | 1 | 1 | ... | ... | ... | 2 | ... | ... | ... | 1 | 1 | ... | ... | ... |
| 5 | Blair, | 5 | ... | ... | ... | 1 | ... | 1 | 1 | 2 | 4 | ... | ... | ... | 1 | ... | 1 | 1 | 1 |
| 6 | Westmoreland, | 5 | 2 | ... | ... | ... | 2 | 1 | ... | ... | 4 | 1 | 1 | ... | 1 | 1 | ... | ... | ... |
| 7 | Butler, | 2 | ... | ... | ... | 1 | ... | ... | 1 | ... | 2 | ... | ... | ... | ... | 1 | ... | 1 | ... |
| 8 | Venango, | 3 | 1 | ... | ... | 1 | 1 | ... | ... | ... | 2 | ... | ... | ... | 1 | ... | ... | 1 | ... |
| 9 | Crawford, | 3 | ... | ... | ... | 2 | 1 | ... | ... | ... | 2 | ... | ... | ... | 1 | ... | ... | 1 | ... |
| 10 | Erie, | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | ... | ... |
| 11 | Cambria, | 5 | ... | 1 | 2 | ... | 2 | ... | ... | ... | 5 | ... | 1 | 2 | 1 | 1 | ... | ... | ... |
| 12 | Lawrence, | 4 | ... | ... | ... | ... | 1 | 2 | ... | 1 | 2 | ... | ... | ... | ... | 2 | ... | ... | ... |
| 13 | Lancaster, | 4 | 4 | ... | ... | ... | ... | ... | ... | ... | 3 | 3 | ... | ... | ... | ... | ... | ... | ... |
| 14 | Montgomery, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 15 | Lackawanna, | 5 | 1 | ... | ... | 2 | 2 | ... | ... | ... | 5 | 1 | ... | 1 | 1 | 2 | ... | ... | ... |
| 16 | Lycoming, | 5 | ... | 1 | ... | ... | ... | 3 | 1 | ... | 3 | ... | 1 | ... | ... | ... | 1 | ... | 1 |

*Table of Non-employment by Months*, 1890-4—Continued.

| | | 1892. | | | | | | | | | 1893. | | | | | | | | | 1894. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | No. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | No. | 0 | 1 | 2 | 3 | 4 | 5 | |
| 4 | Blair, | 44 | 12 | 4 | 7 | 8 | 9 | 3 | .. | 1 | 50 | 7 | 4 | 10 | 11 | 9 | 4 | 4 | 1 | 56 | 4 | 4 | 8 | 16 | 12 | 4 | 8 |
| 5 | Cambria, | 22 | 9 | 4 | 1 | 3 | 2 | 2 | 1 | .. | 23 | 10 | 2 | 2 | 4 | 3 | 2 | .. | .. | 24 | 4 | 3 | 7 | 5 | 3 | 1 | 1 |
| 6 | Westmoreland, | 19 | 4 | 4 | 3 | 2 | 2 | 1 | 3 | .. | 20 | 4 | 4 | .. | 5 | 3 | .. | 4 | .. | 20 | 4 | 3 | 2 | 2 | 3 | 1 | 5 |
| 7 | Butler, | 16 | 11 | 1 | 2 | 2 | .. | .. | .. | .. | 19 | 8 | .. | 2 | 5 | 3 | 1 | .. | .. | 20 | 3 | 2 | 7 | 5 | .. | 1 | 2 |
| 8 | Beaver, | 17 | 5 | 3 | 2 | 2 | 2 | 1 | 2 | .. | 19 | 3 | 5 | .. | 5 | 2 | .. | 4 | .. | 20 | 6 | 3 | 1 | 8 | .. | .. | 1 |
| 9 | Venango, | 15 | 7 | .. | 2 | 4 | 2 | .. | .. | .. | 16 | 5 | .. | 3 | 6 | 2 | .. | .. | .. | 15 | 2 | 3 | 1 | 4 | 3 | 2 | .. |
| 10 | Crawford, | 4 | .. | 1 | .. | 2 | 1 | .. | .. | .. | 4 | 1 | 1 | .. | 2 | .. | .. | .. | .. | 5 | .. | 1 | 3 | 1 | .. | .. | .. |
| 11 | Erie, | 4 | 2 | 1 | 1 | .. | .. | .. | .. | .. | 3 | 1 | 1 | .. | .. | 1 | .. | .. | .. | 6 | 1 | 1 | 2 | 1 | .. | .. | 1 |
| 12 | Lackawanna, | 9 | 7 | 2 | .. | .. | .. | .. | .. | .. | 12 | 8 | 2 | 1 | .. | 1 | .. | .. | .. | 13 | 7 | 3 | 1 | 2 | .. | .. | .. |
| 13 | Lycoming, | 11 | 5 | 1 | 1 | .. | 3 | .. | 1 | .. | 12 | 2 | 2 | .. | 3 | 4 | .. | 1 | .. | 14 | 5 | 1 | 1 | 4 | 1 | 1 | 1 |
| | *Plasterer.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Philadelphia, | 64 | 8 | 2 | 15 | 18 | 15 | 2 | 2 | 2 | 66 | 8 | 4 | 12 | 21 | 10 | 6 | 4 | 1 | 90 | 12 | 8 | 19 | 25 | 8 | 12 | 6 |
| 2 | Mercer, | 3 | .. | .. | 1 | 1 | 1 | .. | .. | .. | 4 | .. | 1 | .. | 2 | 1 | .. | .. | .. | 4 | .. | .. | .. | 3 | 1 | .. | .. |
| 3 | Blair, | 9 | 2 | 1 | 1 | 3 | 1 | .. | 1 | .. | 9 | .. | 2 | 1 | 5 | .. | .. | 1 | .. | 9 | .. | .. | 2 | 3 | 1 | 2 | 1 |
| 4 | Westmoreland, | 2 | .. | .. | .. | 1 | .. | .. | 1 | .. | 2 | .. | .. | .. | 1 | 1 | .. | .. | .. | 2 | .. | .. | 1 | 1 | .. | .. | .. |
| 5 | Butler, | 2 | 1 | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | .. | 1 | 1 | .. | .. | .. | 4 | .. | .. | 1 | .. | 2 | .. | 1 |
| 6 | Venango, | 2 | .. | 1 | .. | .. | .. | 1 | .. | .. | 2 | .. | .. | 1 | .. | .. | .. | 1 | .. | 2 | .. | .. | .. | 2 | .. | .. | .. |
| 7 | Crawford, | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | ... | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| 8 | Beaver, | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | ... | .. | .. | .. | .. | .. | .. | .. |
| 9 | Lycoming, | 5 | 1 | .. | .. | 2 | 2 | .. | .. | .. | 5 | 1 | .. | .. | 2 | 2 | .. | .. | .. | 3 | 1 | .. | 1 | 1 | .. | .. | .. |

| | *Bricklayer.* | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Philadelphia, | 465 | 89 | 34 | 59 | 116 | 105 | 33 | 28 | 1 | 517 | 84 | 37 | 74 | 124 | 111 | 36 | 33 | 18 | 647 | 117 | 52 | 135 | 170 | 87 | 28 | 58 |
| 2 | Allegheny, | 17 | 2 | 1 | 3 | 4 | 2 | 3 | 2 | .. | 16 | 1 | 1 | .. | 2 | 4 | 4 | 3 | 1 | 24 | .. | 1 | 4 | 9 | 7 | 3 | .. |
| 3 | Beaver, | 3 | .. | .. | .. | 2 | 1 | .. | .. | .. | 4 | .. | 1 | .. | 1 | 2 | .. | .. | .. | 6 | .. | .. | .. | 4 | 2 | .. | .. |
| 4 | Mercer, | 2 | .. | .. | .. | 1 | 1 | .. | .. | .. | 2 | .. | .. | .. | 1 | 1 | .. | .. | .. | 2 | .. | .. | .. | 1 | .. | .. | 1 |
| 5 | Blair, | 4 | .. | .. | 1 | .. | .. | 1 | 2 | .. | 4 | .. | .. | .. | .. | 2 | .. | 2 | .. | 6 | 1 | .. | .. | 1 | 2 | 2 | .. |
| 6 | Westmoreland, | 4 | 1 | .. | 1 | 1 | .. | 1 | .. | .. | 4 | 1 | .. | 1 | .. | .. | 2 | .. | .. | 6 | .. | .. | .. | 1 | 1 | 1 | 3 |
| 7 | Butler, | 2 | .. | .. | .. | .. | 1 | .. | 1 | .. | 2 | .. | .. | .. | .. | .. | .. | 2 | .. | 2 | .. | .. | .. | 1 | 1 | .. | .. |
| 8 | Venango, | 3 | .. | .. | .. | .. | 1 | 1 | .. | 1 | 2 | .. | .. | .. | .. | .. | 1 | 1 | .. | 4 | .. | .. | .. | 1 | 2 | 1 | .. |
| 9 | Crawford, | 4 | .. | .. | .. | 2 | .. | .. | 2 | .. | 4 | .. | .. | .. | 1 | .. | 1 | 2 | .. | 4 | .. | .. | .. | 3 | 1 | .. | .. |
| 10 | Erie, | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 1 | 1 | .. | .. | .. |
| 11 | Cambria, | 5 | .. | 1 | 2 | .. | 1 | .. | 1 | .. | 4 | .. | 1 | 1 | .. | 2 | .. | .. | .. | 5 | .. | 1 | .. | .. | 1 | 3 | .. |
| 12 | Lawrence, | 3 | .. | .. | 1 | 1 | .. | .. | .. | 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 6 | . | .. | 1 | 1 | 2 | .. | 2 |
| 13 | Lancaster, | 3 | 3 | . | .. | .. | .. | .. | .. | .. | 5 | | .. | .. | .. | .. | .. | .. | 2 | 5 | 5 | .. | .. | .. | .. | .. | .. |
| 14 | Montgomery, | ... | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | . | .. | 1 | .. | .. | .. | .. | .. | .. | 1 |
| 15 | Lackawanna, | 4 | .. | .. | 1 | 1 | 2 | .. | .. | .. | 5 | .. | .. | 1 | 2 | 2 | .. | .. | .. | 7 | .. | .. | 3 | 2 | .. | .. | 2 |
| 16 | Lycoming, | 6 | .. | 2 | .. | .. | 1 | 3 | .. | .. | 5 | .. | .. | 2 | 1 | .. | 1 | 1 | .. | 8 | .. | 1 | 1 | 1 | 3 | 2 | .. |

In a few cases their non-employment was the consequence of strikes. During 1894 there was no strike among laborers employed in the building trades. The following table shows the strikes that occurred in the years 1890, '91, '92 and '93. The more important one occurred in Pittsburgh in 1893.

*Strikes in Building Trades.*

| | | Number engaged. | Duration. |
|---|---|---|---|
| *1891.* | | | |
| Stone masons, Pittsburg, | Shorter hours and increase of wages. | 1,600 | 60 |
| Planing mill hands. Erie, | Shorter hours, | 50 | 8 months. |
| Planing mill hands. Erie, | For recognition of trade unions. | 33 | 8 months. |
| Plumbers, Pittsburg, | Shorter hours and increase of wages. | 500 | 60 |
| Tin roofers. Pittsburg, | Shorter hours and increase of wages, | 275 | 60 |
| Tile layers. Pittsburg, | Shorter hours and increase of wages, | 30 | 60 |
| Stone cutters, Pittsburg, | Shorter hours and increase of wages, | 600 | 60 |
| Plasterers, Pittsburg, | Shorter hours and increase of wages. | 375 | 60 |
| Bricklayers. Pittsburg, | Shorter hours and increase of wages, | Not estimated, | 60 |
| House painters, | Shorter hours and increase of wages. | do. | 60 |
| Hod carriers, | Shorter hours and increase of wages, | do. | 60 |
| Carpenters, | Shorter hours and increase of wages, | do. | 60 |
| Electricians, | Shorter hours and inerease of wages, | do. | 60 |
| *1892.* | | | |
| Metal roofers, Philadelphia, | Refusal of employers to agree to terms of employes. | 158 | 11 |
| *1893.* | | | |
| Plasters, Philadelphia, | For increase of wages, | 1,560 | 28 |

Their remuneration has varied greatly, running from a small sum to nearly $1,100 annually. In one case the wages reported by a bricklayer for the years 1890 to 1893 are $998.40, $1,088.88, $989,82 and $776.88. In another case a bricklayer received for the same period annually $609.00, $730.00, $700.00 $865.00, and in another case a bricklayer made the following return: 1883, $667.03, 1884, $622.87, 1885, $723.23, 1886, $828.45, 1887, $789.98, 1888, $717.40, 1889, $758,65, 1890, $882.75, 1891, $737.15, 1892, 797.71, 1893, $895.47 and in 1894 $652.74. In most cases no returns could be obtained because no accounts were kept. If such a table could have been prepared, giving returns from all, it would have been interesting from many points of view. No average annual remuneration is given because such an average between the return of a man who has been employed regularly during the year, and perhaps at a high rate, and the return of a man who has been employed only a few days or weeks, and who has perhaps received a small remuneration for that time, signifies nothing. It contains no real information concerning the remuneration of any one. The more important question in this connection is, how much could a working man have earned had he been so inclined? Was his failure to earn more occasioned by sickness or lack of work? In other words, was it due to some cause outside of himself, or was it due to some failure on his part? This is a fundamental

question, and unless it can be satisfactorily answered one should be very slow to build up averages of rates of wages, or of annual remuneration. We think it is fair to assume that all receive the same wages under similar conditions, and consequently those who receive less suffered by sickness or otherwise, or were less competent to earn the remuneration that others received.

---

Another subject worthy of comment is a question relating to the introduction of machinery. The several classes above mentioned were requested to state the effect of introducing it, and especially whether any workingman had been displaced, and if so, to what extent. No doubt the effect of introducing such machinery in the beginning is to displace working men, for that, indeed, is the very object of it; but it has been shown again and again that products are thereby cheapened and this leads to a larger consumption which in turn creates a demand for an increased product, and thus the men displaced in the beginning are re-employed to satisfy the demand. This is the history everywhere of introducing labor-saving machinery. There are some other results hardly less important. One of them is that occupations have become less severe than they were before. Less muscle is expended in guiding the machinery than was expended in the old way. With respect to the exercise of skill, several things may be said. First, much of the machinery requires a high order of skill, and therefore those employed in managing it receive as good, or higher wages than they did formerly. An illustration or two may be given. Within a few years a machine has been invented for setting type, which if managed by an intelligent workman produces very satisfactory results. Such a workman receives perhaps higher wages than he did when setting type by the old method, but the degree of skill that he must exercise is greater. On the other hand, one of the most remarkable effects of introducing machinery is to divide and simplify the work so much that a very low order of skill can perform a particular process. The machinery employed in making a watch is one of the best illustrations that can be given. To make one by hand requires a high order of skill, but since the invention of machinery for this purpose only a few persons, those who make and temper the springs and bake the plates and assemble the parts, require very much skill. Nearly every other process is so simple that it can be performed by a person of ordinary intelligence. In a short time, therefore, persons acquire great dexterity in managing the machinery and therefore are able to produce great results.

---

A great deal of machinery has been introduced into the building trades of late years. Some of the comments of the workingmen with respect to its introduction may be given.

If it were not for the piece-work system and machinery, carpenters would get as much pay as bricklayers. We get a great deal less wages and are obliged to find our tools, which number more and are more expensive than those of all other workmen in building trades combined. Machinery does displace workmen for as a boy I worked in a factory where wall paper printing was done, and one machine could do as much work in a day as twenty-five men.

Machinery affects this trade I suppose to a greater extent than any other. As all work was formerly done by hand and now putting it up in the buildings is about all that is done without the aid of machinery.

---

Machinery has displaced workmen, as by the use of it, one man is enabled to do the work of ten. Carpenter work, as it is done today, is far inferior to the old fashioned hand work.

---

As to the introduction of machinery I would say, that the use of wood-working machinery has gotten to be an old story now. Of course it has reduced the number of workmen, for if there was no machinery there would be work for every one and wages would be higher, but then to offset that there would not be so much building going on, which would be about as bad. The use of machinery has tended to lower wages at least ten per cent. I would say.

---

In answer to question seventeen, as to the use of machinery displacing workmen, I would say that in former times paints were ground and mixed by hand, each master painter doing his own work. Now they are ground and mixed in the large paint factories and sold ready to put on, which, of course, reduces the number of workmen necessary. As to whether it has had any effect upon the wages I am not able to determine.

---

I should say that the use of machinery in this trade has displaced about twenty per cent. of workmen, but I can not say whether or not it has affected the rate of wages.

---

As to machinery displacing workmen, it has to a great extent, as formerly if the weather was to bad to work outside the men could work in the shop at putting tin together; now the employers can get it put together by machinery cheaper than to pay men three dollars a day to do it.

---

As to the use of machinery of course it has revolutionized the manufacture of tin-ware, and by the use of it tin for roofing purposes can be put together by one man and he can do as much in a day as three or four men formerly could by hand.

---

In answer to question No. Seventeen, would say that the introduction of machine mixed mortar has not affected plasterers, but it has plasterers' laborers, as where it is used, there is one laborer to every three men. Where hand-made mortar is used there is a laborer to every two men.

---

In answer to question seventeen I would say that tile work, paper mache and iron and steel walls and ceilings do away with plasterers' work to a very great extent in large building operations.

---

In answer to question seventeen I can say that in our trade the introduction of machinery has displaced more workmen than in any other of the building trades. Why the mill in which I am employed the sandpapering machine has taken the place of eight men, and the

introduction of machinery has lowered the wages of carpenters greatly. The bricklayers and plasterers command much better wages than carpenters because machinery can not be used in those trades.

---

As to the introduction of machinery displacing workmen, it has displaced too many I am sorry to say, and it has been the means of lowering the wages of those that are left, and of overrunning the trade with what are termed "saw and hatchet" carpenters or men who do not know the trade.

Of course the introduction of machinery has affected the rate of wages, and the number of workmen as well, for in former years all work was done by hand, but now all the fine work, such as doors, blinds, sashes, shutters, etc., is manufactured in mills ready to put up. Of course I cannot tell what carpenters' wages would be if machinery was not in use.

---

The wood-working machinery is so old now that it is difficult to say how many men it has displaced. Of course it must have displaced quite a number, and were it not for machinery carpenters would have plenty of work all the year round and then the wages could be kept up; as it is, it is easy for employers to get all the men they want at any rate of wages offered. In my opinion the only way in which a working man's condition could be bettered is by enacting a law shortening the hours of labor. Then the workingman could have some enjoyment of his life.

---

In answer to question seventeen would say that about two-thirds of the carpenters in this city are idle by reason of the use of machinery, and it has lowered the wages at least one-third.

---

The introduction of machinery has both affected the number of men and the rate of wages. In one of my trades—cabinet making—it has lowered wages forty per cent.

---

The question as to the introduction of machinery displacing workmen seems to be superfluous. Of course it has displaced them, as otherwise it would not be used, and it does affect the rate of wages in this business as witness the difference between carpenter's wages and those of bricklayer's, stone-mason's, stone-cutter's, plumber's, etc. Why bricklayers are paid $4.05 per day and we $2.70, so you can see what difference machinery makes.

---

It is somewhat difficult to answer your question satisfactorily. My experience of forty years at this business forces me to state that notwithstanding the great improvement in wood-working machinery, there is not as good, honest work done on buildings as there was forty years ago when the work was made by hand. The mills where nearly everything connected with a building is made by machinery are conducted by men whose sole desire is to make money, without any regard to the character of the work they turn out. The use of machinery has a tendency to lower wages.

---

The introduction of machinery has displaced workmen in getting

out building material and so doing away with the skilled labor which otherwise would be required to get it out by hand. It has also affected the rate of wages by enabling contractors to put apprentices in mechanic's places.

---

Machinery has displaced workmen, or at least it has lessened the amount of work, as before the advent of machinery in this business plumbers could work in the shops in the winter getting work ready; now there is no work in the winter.

---

Most certainly the introduction of machinery has displaced at least twenty-five per cent. of workmen at this business, but I do not believe it has affected the rate of wages any.

---

The use of machinery has injured trade in this respect. A planing mill operator will take a contract for furnishing the finished work for a building and he, and not the carpenter who puts it up, in the building makes the profit: The mill man makes the profit on the rough lumber.

---

As to machinery I would say that there would be work for perhaps two-thirds more men if there were none in use, and because of its use in this trade it is hard to find a skillful carpenter who can do every kind of hand work.

---

Another subject worthy of comment, is the payment of employes in some parts of the State by giving them store orders. This seems to be more general in Blair county than in any other. Several employes in their returns to the Bureau have criticized strongly the conduct of their employers in adopting this mode of paying them. They declare that not only are their wages low enough, but their actual compensation is still lessened by requiring them to purchase at stores where they cannot obtain as good bargains as elsewhere. We append the story as told by the employes themselves in several cases. Evidently this subject should engage the attention of the legislature. What relations exist between the employers and the owners of such stores is not clearly known, and we would not attempt to draw any inferences without proper facts; but the giving of such orders and their unwilling or forced acceptance by employes are constantly occurring. Many of the abuses of the store order system have been remedied, but this branch of it seems to possess considerable vitality and shows no sign of diminution. A few opinions of workingmen concerning the store order system are added here.

I wish to make a statement in regard to the curse of building trades in this section, I refer to the store order system. If a man applies for work and the employer wants help, he will hire him if he will take store orders. And poverty compels many workmen to work under this system. The man takes the order to the store, say for ten dollars and gets about as much goods as he could for seven dollars in cash, since the man who furnishes the order pays the storekeeper every thirty days, and gets a large percentage or drawback. Again a man may be doing a large business in building and hires men promising to pay them weekly, but he will have fifty excuses for not paying cash, but he can give an order on a store for any-

thing the workman may need. Employers should be compelled to pay their hands every week in cash.

---

The store order system should be abolished by law as since 1890 I have not received a full month's pay in money, but was obliged to take store orders or I could not have gotten work. I know there are four storekeepers in Altoona who have gotten rich by this system.

---

As to the wish expressed in your circular to do something for the improvement of the condition of working men, I would suggest that a law be enacted and enforced imposing a penalty on any employer who pays his workmen with store orders, thereby placing them at the mercy of sharks who demand any price for their goods they see proper. I was paid with such an order some time since, and was obliged to pay from eight to twenty per cent. more than I could have purchased them for if I had the ready cash.

---

There should be something done to compel contractors to pay wages in cash at least every two weeks, and to do away with the pernicious store order system.

## WORKMEN IN BUILDING TRADES.—PHILADELPHIA.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment. | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Bricklayer, | 4 years, | 45 cts. | 45 cts. | 45 cts. | 45 cts. | 45 cts. | All, | 8 months, | 9 months, | 3 months, | months, |
| 2 | England, | do. | 5 | 45 | 45 | 40 | 40 | 40 | 4 months, | 3 | 3 | 3 | 3 |
| 3 | United States, | do. | 5 | 45 | 45 | 45 | 45 | 45 | 4 | 6 | 6 | 1 | 1 |
| 4 | England, | do. | 5 | 45 | ..... | ..... | ..... | 45 | None, | ..... | ..... | ..... | ..... |
| 5 | United States, | do. | 5 | 45 | 45 | 40 | 47 | 35 | 3 months, | 5 | 5 | 6 | 5 |
| 6 | Germany, | do. | 5 | 45 | ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... |
| 7 | United States, | do. | ..... | 40 | 40 | 40 | 40 | 40 | None, | ..... | ..... | ..... | ..... |
| 8 | Germany, | do. | 3 | 45 | ..... | ..... | ..... | ..... | 3 months, | ..... | ..... | ..... | ..... |
| 9 | United States, | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 3 | 3 |
| 10 | Ireland, | do. | 7 | 45 | 45 | 40 | 40 | ..... | All, | ..... | ..... | ..... | ..... |
| 11 | United States, | do. | 5 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 12 | Germany, | do. | 4 | 45 | 45 | 40 | 40 | 40 | 3 months, | ..... | ..... | ..... | ..... |
| 13 | do. | do. | 6 | 45 | 45 | 45 | 45 | 40 | 3 | 3 | 3 | 3 | 3 |
| 14 | United States, | do. | 3 | 45 | 45 | 45 | 45 | 45 | 5 | 5 | 5 | 5 | 5 |
| 15 | England, | do. | No, | 45 | 45 | 45 | 45 | 30 | ..... | ..... | ..... | ..... | ..... |
| 16 | do. | do. | 4 years, | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 17 | United States, | do. | 4 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 18 | do. | do. | 3 | 45 | 45 | 45 | 30 | 30 | 4 | 5 | 5 | 5 | 5 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | do | 4 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 20 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | None. | None. | None. | None. | ..... |
| 21 | do. | do. | 4½ | 45 | 45 | ..... | ..... | ..... | 3 months. | 4 months. | None. | ..... | ..... |
| 22 | do. | do. | 2 | 45 | 45 | 45 | 45 | 45 | None. | ..... | ..... | ..... | ..... |
| 23 | Ireland, | do. | 4 | 45 | 45 | 45 | 45 | 45 | 4 months. | 3 | 3 months. | 2 months. | 3 |
| 24 | United States. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 3 | 4 | 4 | 3 | 3 |
| 25 | Ireland. | do. | 4 | 45 | 45 | 45 | ..... | ..... | 3 | 3 | 3 | 3 | 3 |
| 26 | United States. | do. | 4 | 45 | 45 | 40 | 40 | 40 | 3 | 3 | 3 | 3 | 3 |
| 27 | Germany. | do. | 4 | 45 | 45 | ..... | ..... | ..... | 3 | 3 | ..... | ..... | ..... |
| 28 | England. | do. | 3 | 45 | 45 | 45 | 45 | 40 | 3½ | 2 | 3 | 3 | 2 |
| 29 | Ireland. | do. | 3½ | 45 | 45 | 45 | 45 | 45 | 3 | 2 | 4 | 7 | 2 |
| 30 | United States. | do. | 4 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 31 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 4 | 4 | 4 | 4 | 4 |
| 32 | do. | do. | 1 | 45 | 45 | 45 | ..... | ..... | all. | ..... | ..... | ..... | 2½ |
| 33 | do. | do. | 9 | 45 | 45 | 45 | 45 | 45 | 5 months. | 4 | 4 | 4 | 1 |
| 34 | do. | do. | 5 | 45 | 45 | 45 | ..... | ..... | 2 | 6 | 2 | ..... | ..... |
| 35 | do. | do. | 4 | 45 | 45 | 45 | ..... | ..... | 3 | 3 | 3 | 3 | 3 |
| 36 | do. | do | 4 | 25 | 45 | 45 | 45 | 45 | 4 | 4 | none. | 2 | 2 |
| 37 | do. | do. | 5 | 45 | 45 | 45 | 45 | 40 | all. | ..... | ..... | ..... | ..... |
| 38 | England. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 4 months. | 3 | ..... | 16 | 5 |
| 39 | United States. | do. | 4 | 35 | 45 | 45 | 45 | 45 | 3 | ..... | ..... | ..... | ..... |
| 40 | England. | do. | 5 | 45 | 45 | 45 | 40 | 40 | all. | 5 | 6 | 6 | 5 |
| 41 | United States. | do. | 3 | 50 | 50 | 45 | 45 | 45 | 2 months. | 2 | 3 | 3 | 3 |
| 42 | do. | do | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 8 | 3 | 3 | 3 |
| 43 | Ireland. | do | 4 | 45 | 45 | 45 | 45 | 45 | all. | 5 | 8 | 8 | 4 |
| 44 | United States. | do | 4 | 45 | 45 | 45 | 45 | 40 | 3 months | 8 | ..... | ..... | ..... |
| 45 | do. | do. | 5 | 45 | 45 | 40 | 40 | 40 | 3½ | 7 | ..... | ..... | ..... |
| 46 | do. | do. | 6 | 45 | 45 | 45 | 40 | 40 | none. | ..... | ..... | ..... | ..... |
| 47 | do | do | 3 | 45 | 45 | 45 | 45 | 45 | 3 months. | 3 | 3 | 3 | 3 |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality. Where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 48 | United States. | Bricklayer. | 3½ years. | 45 cts. | 45 cts. | 45 cts. | 45 cts. | 45 cts. | 3 months. | 3 months. | 0 months. | 0 months. | 0 months. |
| 49 | do. | do. | 4 | 45 | ..... | ..... | ..... | ..... | 2 | 2 | 2 | 2 | 2 |
| 50 | do. | do. | 3 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 51 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3½ | 7 | 7 | 7 | 7 |
| 52 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 53 | Ireland. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 3 | 4 | 5 | 3 | 3 |
| 54 | United States. | do. | 4 | 45 | 45 | 45 | 45 | 40 | 1 | ..... | ..... | ..... | ..... |
| 55 | do. | do. | 3 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 56 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 3 | ..... | ..... | ..... | ..... |
| 57 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 4 | 6 | 0 | 0 | 0 |
| 58 | do | do. | 3 | 45 | 45 | ..... | ..... | ..... | ..... | 6 | 6 | 6 | 6 |
| 59 | do. | do. | 4 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 60 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 0 | 4 months. | 4 months. | 4 months. | 4 months. |
| 61 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 0 | 0 | 0 |
| 62 | do. | do. | 4 | 45 | 45 | 45 | 40 | 40 | 1 | 1½ | 2 | 2 | ..... |
| 63 | do. | do. | 4 | 45 | 45 | 45 | 45 | ..... | 0 | 0 | 0 | 0 | 0 |
| 64 | do. | do. | 4 | 45 | 45 | 45 | 45 | ..... | 3 | 3 | 3 | 3 | 3 |
| 65 | do. | do. | 5 | 45 | 45 | 45 | 45 | 35 | 3 | ..... | ..... | ..... | ..... |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66 | do. | do. | 4 | 47 | 45 | 45 | 45 | 45 | 1 | ..... | ..... | ..... | 4 | |
| 67 | England, | do | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 4 | 4 | 4 | 4 | |
| 68 | United States, | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 2 | 0 | 3 | 0 | |
| 69 | England, | do. | 5 | 45 | 45 | 45 | 45 | 40 | 3 | 4 | 4 | 0 | 0 | |
| 70 | United States, | do. | 3 | 45 | 45 | 45 | 45 | ..... | 3 | 2 | 0 | 0 | 6 | |
| 71 | do. | do. | 4 | 45 | 45 | ..... | ..... | ..... | 0 | 0 | 0 | 0 | 0 | |
| 72 | Denmark, | do. | 4 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | |
| 73 | Germany, | do. | 4 | 45 | 45 | 45 | 45 | 45 | 4 | 6 | ..... | ..... | ..... | |
| 74 | United States, | do. | 3½ | 45 | 45 | 47 | 47 | 50 | 3 | 3 | 3 | 3 | 3 | |
| 75 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 6 | 12 | 6 | 3 | 3 | |
| 76 | do. | do. | 4 | 45 | 45 | ..... | ..... | ..... | 3 | 1 | 0 | ..... | ..... | |
| 77 | do. | do. | 4 | 45 | ..... | ..... | ..... | ..... | 3 | 3 | 0 | 0 | 0 | |
| 78 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 2 | 1 | |
| 79 | England, | do. | 4 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | 3 | |
| 80 | United States, | do. | 5 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 81 | do. | do. | 3 | 45 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | |
| 82 | do. | do. | 3 | 45 | 45 | 45 | 40 | 40 | 6 | 3 | 4 | 2 | 5 | |
| 83 | do. | do. | 4 | 50 | 50 | 45 | 45 | 45 | 0 | ..... | ..... | ..... | ..... | |
| 84 | do. | do. | 3 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 85 | do. | do. | 4 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 86 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 4 | 3 | 2 | 0 | |
| 87 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 0 | 0 | 0 | |
| 88 | do. | do. | 3 | 45 | ..... | ..... | ..... | ..... | 5 | ..... | ..... | ..... | ..... | |
| 89 | England, | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 3 | 3 | 4 | 3 | |
| 90 | United States, | do. | 4½ | 45 | 45 | 45 | 50 | 40 | 0 | 0 | 1 | 0 | 2½ | |
| 91 | do. | do. | 7 | 47 | 47 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | |
| 92 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | ..... | ..... | ..... | ..... | |
| 93 | do. | do. | 6 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | |
| 94 | do. | do. | 5 | 45 | 45 | 45 | 40 | 40 | 6 | 4 | 4 | 4 | 4 | |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 95 | United States | Bricklayer | 3½ years | 45 cts. | 45 cts. | 45 cts. | 45 cts. | 45 cts. | 4 months | 4 months, | 0 months, | 0 months, | months. |
| 96 | do. | do. | 3 | 45 | 45 | 45 | 47 | 47 | 2 | ..... | ..... | ..... | ..... |
| 97 | do. | do. | 3 | 45 | ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... |
| 98 | do. | do. | 4 | 45 | 45 | 45 | 45 | ..... | 2 | 4 | 2 | 1 | ..... |
| 99 | do. | do. | 5 | 45 | 45 | 45 | 45 | 40 & 45 | 2½ | 2 | 5 | 4 | 4 |
| 100 | do. | do. | 4 | *20 | *20 | ..... | 45 | 45 | 0 | 0 | ..... | 4 | 5 |
| 101 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 5 | 6 | 6 | 6 | 6 |
| 102 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 3 | 4 | 0 | 0 |
| 103 | do. | do. | 4 | 45 | 45 | 50 | 50 | 40 | 0 | ..... | ..... | ..... | ..... |
| 104 | do. | do. | 4 | 45 | 45 | ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... |
| 105 | do. | do. | 4 | 45 | ..... | ..... | ..... | ..... | 2 | 5 | ..... | ..... | ..... |
| 106 | do. | do. | 5 | 45 | 45 | 45 | 50 | 50 | 0 | ..... | ..... | ..... | ..... |
| 107 | do. | do. | 4 | 45 | 45 | 45 | 40 | 40 | 1 | ..... | ..... | ..... | ..... |
| 108 | do. | do. | 4 7-12 | 45 | 45 | 45 | 45 | 45 | 2 | 3 | 3 | ..... | ..... |
| 109 | do. | do. | 4 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... |
| 110 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 1 | 0 | 2 | 2 | 3 |
| 111 | do. | do. | 5 | 45 | 45 | 40 | 40 | 33 | 4 | 4 | 4 | 3 | 6 |

* Worked as laborer 1893 and 1894.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 112 | do. | do | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 4 | | | |
| 113 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 4 | 4 | 4 | 4 | 4 |
| 114 | do. | do. | 3 | 45 | 45 | 45 | 45 | ..... | 3 | 2 | 3 | 2 | ..... |
| 115 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 3 | 4 | 4 | 0 | 0 |
| 116 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | ..... | ..... | ..... | ..... |
| 117 | do. | do. | 4 | 45 | 45 | 45 | 40 | 40 | 2 | 2 | 2 | 2 | 2 |
| 118 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 4 | 6 | 8 | 9 | 9 |
| 119 | do. | do. | 4 | 45 | 45 | ..... | ..... | ..... | 4 | 2 | ..... | 6 | 2 |
| 120 | do. | do. | 3 | 45 | 45 | 45 | 30 | ..... | 3 | 4 | 4 | 3 | ..... |
| 121 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 3 | 3 | 3 | 3 |
| 122 | Germany, | do. | 4 | 45 | ..... | ..... | ..... | ..... | 5½ | ..... | ..... | ..... | ..... |
| 123 | Ireland, | do. | 5 | 45 | 45 | 45 | 45 | 47 | 6 | 4 | 4 | 4 | 4 |
| 124 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 2 | 3 | 3 | 3 | ..... |
| 125 | Russia. | do. | 4 | 45 | 45 | 45 | 45 | ..... | 4 | 4 | 4 | 4 | ..... |
| 126 | do. | do. | 6 | 45 | 45 | 45 | 40 | 40 | 0 | 6 | 6 | 6 | 6 |
| 127 | United States. | do. | 4 | 53 | 53 | 53 | 53 | 45 | ..... | ..... | ..... | ..... | ..... |
| 128 | do. | do. | 4 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... |
| 129 | England, | do. | 6 | 45 & 55 | 45 & 55 | 45 & 50 | 45 & 50 | 45 | 3 | 2 | 2 | 4 | ..... |
| 130 | United States, | do. | 3 | 45 | 45 | 45 | 45 | ..... | 0 | 0 | ..... | ..... | ..... |
| 131 | do. | do. | 4½ | 45 | 45 | 45 | 47 | 50 | 3 | 4 | 4 | 5 | 3 |
| 132 | * do. | do. | 3 | ..... | ..... | ..... | ..... | ..... | 0 | 0 | 0 | 0 | 0 |
| 133 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 134 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 1 | ..... | ..... | ..... | ..... |
| 135 | do. | do. | 3 | 45 | 45 | 40 | 40 | 33 | ..... | ..... | ..... | ..... | ..... |
| 136 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 6 | 2 | 1 | 0 | 0 |
| 137 | England. | do. | 3½ | 45 | 45 | 45 | ..... | ..... | 3 | 4 | 2 | ..... | ..... |
| 138 | United States. | do. | 4 | 45 | 45 | 45 | 45 | 47 | 2 | 2 | 3 | ..... | ..... |
| 139 | England, | do. | 7 | 45 | 45 | 42 | 42 | 42 | 4 | 0 | 3 | 3 | 4 |

* Am now inspector of sewers in Philadelphia.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30th, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 140 | United States. . | Bricklayer. . . | 4 years. . . . | 45 cts. . . | 45 cts. . . | . . . . . | . . . . . | . . . . . | 0 months, . . | 1 month | . . . . . | . . . . . | . . . . . |
| 141 | England. . . . . | do. . . | 7 . . . | 45 . . | 45 . . | 45 cts. . . | 40 cts. . . | 40 cts. . . | . . . . . | 2 | . . . . . | . . . . . | . . . . . |
| 142 | United States. . | do . . | 4 . . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | 0 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 143 | do. . . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 40 . . | 40 . . | 2 . | 2 | 2 months, | 2 months, | 2 months, |
| 144 | England. . . . . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 40 . . | 0 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 145 | United States, . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 4 . . | 4 | 4 | 4 | 4 |
| 146 | do. . . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 2 . . | 1 | . . . . . | . . . . . | 3 |
| 147 | do. . . | do. . . | 3½ . . . | 45 . . | 45 . . | 45 . . | 45 . . | . . . . . | 2 . . | 3 | 3 | 3 | . . . . . |
| 148 | do. . . | do. . . | 5 . . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 149 | do. . . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 40 . . | 4 . . | 2 | 3 | 2½ | 2 |
| 150 | do. . . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 2 . . | 1½ | 3 | 2½ | 1½ |
| 151 | do. . . | do. . . | 4 . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 152 | do. . | do. . . | 3 . . . | 45 . . | 45 . . | 27 . . | 27 . . | 27 . . | 1½ . . | 0 | 0 | 0 | 0 |
| 153 | do. . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | . . . . . | . . . . . | 0 . . | 0 | 0 | . . . . . | . . . . . |
| 154 | England, . . . . | do. . . | 5 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 0 . . | 1 | 1 | 1 | 1 |
| 155 | United States, . | do. . . | 4 . . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | 5½ . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 156 | do. . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | . . . . . | . . . . . | 4 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| *157 | do. . | do. . | 3 . . . | 50 . . | 50 . . | 50 . . | 50 . . | 50 . . | ½ . . | 1 | 1 | 1 | 1 |
| 158 | do. . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 4 . . | 2 | 2 | 2 | 2 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 159 | do. | do. | 3 | 45 | 45 | 45 | 45 | | | | | | | |
| 160 | do | do. | 4 | 45 | 45 | 45 | 45 | 45 | 0 | | | | | |
| 161 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 0 | 4 | 5 | 8 | 4 |
| 162 | Ireland. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 1 | 4 | 0 |
| 163 | United States. | do. | 4 | 45 | | | | | 2 | | | | |
| 164 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | | | | | |
| 165 | England. | do. | 5 | 39 | | | | | | | | | |
| 166 | United States. | do. | 4 | 45 | 45 | 45 | 45 | 47½ | 0 | 2 | 2 | 2 | 2 |
| 167 | England. | do. | 5 | 45 | 45 | 45 | 45 | 47½ | 2 | 3 | 3 | 3 | 3 |
| 168 | Denmark. | do. | 4 | 45 | 45 | 45 | | | 1½ | 3 | | | |
| 169 | United States. | do. | 3½ | 45 | 45 | 45 | 40 | 40 | | | | | |
| 170 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 5 | 3 | 4 | 4 |
| 171 | Ireland. | do. | 3 | 45 | 45 | 45 | 50 | 50 | 0 | 0 | 0 | 0 | 0 |
| 172 | England. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 3 | 4 | 3 | 4 | 5 |
| 173 | United States. | do. | 3 | 45 | 45 | 45 | | | 3 | | | | |
| 174 | England. | do. | 5 | 45 | | | | | | | | | |
| 175 | United States. | do. | 3 | 45 | | | | | | | | | |
| 176 | England | do. | 7 | 45 | 45 | 45 | 45 | 40 | 2½ | 1½ | 2 | 2 | |
| 177 | Scotland. | do. | 4 | 45 | 45 | 45 | 45 | 45 | | | | | |
| 178 | Ireland. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 4 | 2 | 3 | 2 | 2 |
| 179 | Scotland. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 2 | 4 | 4 | 4 | 4 |
| 180 | United States. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | | | | |
| 181 | do | do. | 5 | 45 | 45 | 45 | 40 | 40 | 0 | 0 | 5 | 6 | 5 |
| 182 | Germany. | do | 3 | 45 | 45 | 45 | 45 | 45 | | | | | |
| 183 | United States. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 6 | | | | |
| 184 | do | do. | 4 | 45 | | | | | 6 | | | | |
| *185 | do | do. | 3 | | 45 | 45 | 45 | 45 | 0 | 0 | 0 | 0 | 6 |
| 186 | England. | do. | 4 | 45 | | | | | 3 | | | | |

*Employer in 1894.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment. | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 187 | United States, | Bricklayer, | 4 years, | 45 cts., | 45 cts., | 45 cts., | 45 cts., | 45 cts., | 2 months, | ..... | ..... | ..... | ..... |
| 188 | do. | do. | 3 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 189 | do. | do. | 3 | 33 | 45 | 30 | 26 | ..... | 6 | 5 months, | 5 months, | 5 months, | 5 months, |
| 190 | do. | do. | 4¼ | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 0 | 2 | 0 |
| 191 | do. | do. | 4 | 45 | ..... | ..... | ..... | ..... | 3 | ..... | ..... | ..... | ..... |
| 192 | Ireland, | do | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 1 | 2 | 1 | 3 |
| 193 | United States, | do. | 4 | 45 | 45 | 45 | 40 | 40 | 3 | ..... | ..... | ..... | ..... |
| 194 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 1 | 1 | 0 | 1 | 3 |
| ‡195 | do. | do. | 4 | 39 | 39 | 39 | 47 | 50 | 0 | 2 | 2 | 3 | 2 |
| 196 | Ireland, | do. | 3 | 45 | ..... | ..... | ..... | ..... | 4 | ..... | ..... | ..... | ..... |
| 197 | United States, | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 0 | 0 | 0 | 0 |
| 198 | do. | do. | 3¼ | 45 | 45 | 45 | 45 | ..... | 1 | 5 | 5 | 5 | ..... |
| 199 | England, | do. | 6 | 45 | 45 | 45 | 45 | 45 | 5 | 8 | 8 | 8 | 8 |
| 200 | United States, | do. | 4 | 45 | 45 | 45 | 45 | 45 | 4 | 8 | 8 | 8 | 10 |
| 201 | England, | do. | 7 | 45 | 45 | 45 | 45 | 45 | 6 | ..... | ..... | ..... | ..... |
| 202 | Scotland, | do. | 5 | 30 | ..... | ..... | ..... | ..... | 6 | 5 | ..... | ..... | ..... |
| 203 | Germany, | do. | 3 | 45 | ..... | ..... | ..... | ..... | 3 | 4 | 5 | 5 | 6 |

‡Sewer Inspector $100.00 per month.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 204 | United States. | do. | 4 | 45 | 45 | 45 | 40 | 40 | 1½ | 4 | 4 | 4 | 4 |
| 205 | do. | do. | 5 | 45 | 45 | 45 | 50 | 52½ | 3 | 3 | 3 | 3 | 3 |
| 206 | do. | do. | 3 | 40 | 45 | 40 | 40 | 35 & 40 | 0 | 2 | 3 | ..... | ..... |
| 207 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 4 | 2 | 2 | 3 | 2 |
| 208 | do. | do. | 5 | 45 | ..... | ..... | ..... | ..... | 0 | 0 | ..... | ..... | ..... |
| 209 | Ireland. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 1 | 1 | 1 | ..... | ..... |
| 210 | Germany, | do. | 4 | 45 | 45 | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... |
| 211 | United States. | do. | 7 | ..... | ..... | ..... | ..... | ..... | 6 | 12 | 12 | 12 | 12 |
| 212 | do. | do. | 2¾ | 45 | ..... | ..... | ..... | ..... | 6 | 12 | 12 | 12 | 12 |
| 213 | do. | do. | 4 | 45 | 40 | 40 | 40 | 40 | 0 | 0 | 0 | 0 | 0 |
| 214 | do. | do. | 4 | 45 | 45 | 45 | 40 | 40 | 2 | ..... | ..... | 3 | ..... |
| 215 | England, | do. | 5 | 45 | 45 | 40 | 40 | 40 | 6 | 4 | 3 | 2 | |
| 216 | United States, | do. | 4 | 45 | 45 | 45 | 40 | 45 | 2 | 3 | 5 | 6 | |
| 217 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 1 | 3 | 3 | 3 | 3 |
| 218 | do. | do. | 5 | 45 | 45 | 45 | 45 | 40 | 6 | 4 | ..... | 7 | 4 |
| 219 | do. | do. | 4 | 45 | 45 | 45 | 45 | ..... | 1 | 1 | 1 | 1 | 1 |
| 220 | Ireland. | do. | 5 | 45 | 45 | 45 | 45 | 40 | 2 | 2 | 1 | 2 | 3 |
| 221 | United States, | do | 2½ | 45 | 45 | 45 | 45 | 45 | ..... | ..... | 4 | 4 | 4 |
| 222 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 0 | 0 | 0 |
| 223 | Sweden, | do. | 3 | 45 | 45 | 40 | 35 | 30 | 6 | 4 | ..... | ..... | ..... |
| 224 | United States. | do. | 4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 225 | England, | do. | 7 | 45 | 45 | 45 | 50 | ..... | 6 | 4 | 4 | 4 | 4 |
| 226 | United States. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 5 | 6 | 6 | 5 |
| 227 | do. | do. | 4 | 45 | 45 | 45 | 40 | 40 | 3 | 0 | 0 | 6 | 6 |
| 228 | do | do | 4 | 45 | 45 | 45 | 40 | 40 | 6 | 6 | 6 | 3 | 3 |
| 229 | do | do. | 6 | 45 | ..... | ..... | ..... | ..... | 2½ | 3 | 3½ | 4 | ..... |
| 230 | do | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | ..... | ..... | ..... | ..... |
| 231 | do | do. | 3 | 45 | 45 | 45 | 45 | ..... | 5 | 4 | ..... | ..... | ..... |
| 232 | | do | 7 | 45 | 45 | 45 | 50 | ..... | 3 | 3 | 3 | 4 | 4 |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1884 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 233 | United States. | Bricklayer, | 4 years, | 45 cts., | 45 cts., | 45 cts., | 45 cts., | 45 cts., | 2 months, | ..... | ..... | ..... | ..... |
| 234 | do. | do. | 3 | 45. | 45 | 45 | 45 | 40 | 2 | ..... | ..... | ..... | ..... |
| 235 | Ireland, | do. | 3 | 45 | 45 | ..... | ..... | ..... | 6 | 5 months. | ..... | ..... | ..... |
| 236 | United States, | do. | 3 | 45 | 45 | 45 | 27½ | 27½ | 0 | ..... | ..... | ..... | ..... |
| 237 | do. | do. | 4 | 45 | 45 | 45 | ..... | ..... | 4 | 3 | 1 month. | ..... | ..... |
| 238 | do. | do. | 4 | 45 | 45 | 45 | 40 | 40 | 2 | ..... | ..... | ..... | ..... |
| 239 | do. | do. | 4 | 45 | ..... | ..... | ..... | ..... | 3 | 12 | 0 | 0 months, | 0 months. |
| 240 | Scotland, | do. | 3 | 45 | 45 | 45 | 50 | 50 | 2 | 4 | 4 | 4 | 4 |
| 241 | United States, | do. | 4 | 45 | 45 | 45 | 45 | 40 | 4 | 7 | 3 | 3 | 4 |
| 242 | do. | do. | 6 | 45 | 45 | 45 | 45 | 45 | 6 | 3 | 4 | 8 | 5 |
| 243 | Ireland, | do. | 5 | 45 | 45 | 45 | 40 | 40 | 6 | 0 | 2 | 6 | 0 |
| 244 | United States, | do. | 4 | 45 | 45 | 45 | 45 | 40 | 6 | 12 | 3 | 3 | 3 |
| 245 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 4 | 4 | 4 | 4 |
| 246 | do. | do. | 4 | 45 | 45 | 45 | 45 | 40 | 3 | 1 | 1 | ..... | ..... |
| 247 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 1 | ..... | ..... | ..... | ..... |
| 248 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 2 | 2 | 0 | 2 |
| 249 | do. | do. | 4 | 50 | 61 | 61 | 50 | 50 | 3 | 4 | 4 | 4 | 4 |
| 250 | England, | do. | 7 | 47½ | 47½ | 47½ | 45 | 45 | 0 | 0 | ..... | ..... | ..... |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 251 | United States. . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 50 . . | . . . . . | 4 . . | 3 | 3 | 0 | . . . . . |
| 252 | do. . . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 5 . . | 5 | 5 | 5 | 5 |
| 253 | England, . . . . | do. . . | 5 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 50 & 35 . . | 0 . . | . . . . . | . . . . . | 0 | 0 |
| 254 | United States. . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 35 . . | 35 . . | 3 . . | 0 | 0 | 0 | 0 |
| 255 | do. . . | do. . . | 8 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 2 . . | 3 | 3 | 3 | 0 |
| 256 | do. . . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 0 . . | 0 | 4 | 4 | 4 |
| 257 | do. . . | do. . . | 4¼ . . . | 45 . . | 45 . . | 40 . . | . . . . . | . . . . . | 2 . . | 2 | 4 | 4 | 4 |
| 258 | do. . . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 40 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 259 | England, . . . . | do. . . | 6 . . . | 45 . . | 45 . . | 45 . . | 40 . . | 40 . . | 2 . . | 3 | 0 | 2 | 3 |
| 260 | Germany. . . . | do. . . | 3 . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | 6 . . | 12 | 12 | 12 | 12 |
| 261 | United States. . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 262 | do. . . | do. . . | 9 . . . | 45 . . | 45 . . | 45 . . | 40 . . | 40 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 263 | do. . . | do. . . | 4 . . . | 45 & 50 . . | 45 & 50 . . | 45 & 50 . . | 47 & 45 . . | 47 & 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 264 | do . . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | . . . . . | . . . . . | 1 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 265 | do. . . | do. . . | 3 . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 266 | do. . . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . | 40 . . | 3 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 267 | Hungary. . . . . | do. . . | no. . . | 45 . . | 45 . . | 45 . . | 40 . . | 40 . . | . . . . . | 4 | 2 | 3 | 5 |
| 268 | United States. . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 2 . . | 3 | 3 | 3 | 3 |
| 269 | do. . . | do. . . | 6 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 4 . | 3 | 2 | 2 | 3 |
| 270 | do. . . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 5 . . | 0 | 0 | 0 | 0 |
| 271 | do. . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . | 1 . . | 3 | 3 | 3 | 2 |
| 272 | do. . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . | 45 . . | 3 . . | 3 | 3 | 3 | . . . . . |
| 273 | England, . . . . | do. . . | 5 . . . | 45 . . | 45 . . | 45 . . | 45 . . | . . . . . | 2 . . | 2 | 2 | 2 | 6 |
| 274 | United States, . | do. . . | 4 . . . | 45 . . | 43 . . | 45 . . | 40 . | 40 . . | 3 . . | 3 | 3 | 3 | . . . . . |
| 275 | do. . | do. . . | 1 . . . | 840* . . | 1635* . . | 1500* . . | 55 . . | 55 . . | 0 . . | 0 | 0 | 0 | 0 |
| 276 | do. . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . | 45 . . | 2 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 277 | do. . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 3 . . | 3 | 3 | 4 | 3 |
| 278 | do. . | do. . . | 5 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 35 . | 2 . . | 2 | 2 | 2 | 2 |

* Report of wages by the year.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 279 | United States. . | Bricklayer, . . | 5 years. . . . | 30-40 cts.. | 40 cts. . . | 35 cts. . . | 35 cts. . . | 45 cts. . . | 2½ months . . | 2½ months | 2½ months | 2½ months | 2½ months |
| 280 | England. . . . . | do. . . | 7 . . . | 45 . . . | 45 . . | 45 . . | 45 . . | 50 . . | 2½ . . | 4 | 5 | 2 | 0 |
| 281 | United States. . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 2 . . | 1 | 4 | 6 | 4 |
| 282 | do. . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 3 . . | 2 | 2½ | 2½ | 2½ |
| 283 | do. . | do. . . | 4 . . . | 39 . . | 39 . . | 39 . . | 39 . . | 39 . . | 0 . . | 0 | 0 | 0 | 0 |
| 284 | do. . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 5 . . | 5 | 5 | 4 | 4 |
| 285 | Ireland. . . . . | do. . . | 4 . . . | 50 . . | 50 . . | 50 . . | 50 . . | 50 . . | 6 . . | 0 | 0 | 0 | 0 |
| 286 | England. . . . . | do. . . | 7 . . . | 27-33 . . | 45 . . | 45 . . | 45 . . | 45 . . | 6 . . | 4 | 4 | 4 | 4 |
| 287 | United States. . | do. . . | 4 . . . | 45 . . | 45 . . | . . . . . | . . . . . | . . . . . | 6 . . | 4 | 3 | 3 | 3 |
| 288 | do. . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 10 . . | 3 . . | 6 | 6 | 6 | 9 |
| 289 | do. . | do. . . | 5 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 290 | do. . | do. . . | 4 . . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | 3 . . | 4 | 4 | 4 | 4 |
| 291 | do. . | do. . . | 4 . . . | 45 . . | 45 . . | 40 . . | 40 . . | 40 . . | 1 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 292 | do. . | do. . . | 4 . . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | 4 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 293 | England. . . . . | do. . . | 7 . . . | 45 . . | 45 . . | 45 . | 45 . . | 45 . . | 0 . . | 3 | 3 | 3 | 3 |
| 294 | United States. . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . | 45 . . | 45 . . | 0 . . | 0 | 0 | 4 | 4 |
| 295 | do. . | do. . . | 4½ . . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | 2 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 296 | do. . | do. . . | 4 . . . | 45 . . | 45 . . | . . . . . | . . . . . | . . . . . | 4 . . | 1½ | . . . . . | . . . . . | . . . . . |
| 297 | do. . | do. . . | 5 . . . | 45 . . | 45 . . | . . . . . | . . . . . | . . . . . | 3½ . . | 5 | 6 | 4 | 5 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 298 | do. | do. | 7 | 35 | 35 | 45 | 45 | 45 | ..... | 4 | 4 | 4 | ..... |
| 299 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 & 60 | 3 | 3 | 3 | 3 | 1 |
| 300 | do. | do. | 4 | 4 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 301 | United States, | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 4 | 4 | 4 | 3 |
| 302 | do. | do. | 4 5-12 | 45 | 45 | 45 | 38 | 35 | ..... | ..... | ..... | ..... | ..... |
| 303 | England, | do. | 7 | 45 | 45 | 45 | 45 | ..... | 6 | 12 | 12 | 12 | 12 |
| 304 | United States, | do | 3 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 305 | do. | do. | 4 | 45 | 45 | 45 | 40 | 40 | ..... | ..... | ..... | ..... | ..... |
| *306 | Germany, | do. | 6 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 307 | United States | do. | 4 | 45 | 45 | ..... | ..... | ..... | 2 | 2 | ..... | ..... | ..... |
| 308 | Ireland | do | 3 | 45 | 45 | 35 | 35 | 45 | 6 | 8 | 8 | 6 | 6 |
| 309 | do. | do. | 4 | 50 | 50 | 50 | 50 | 50 | 1 | 2 | 2 | 2 | 2 |
| 310 | United States, | do. | 3 | 45 | 45 | 45 | 45 | 45 | 2 | 3 | 3 | 3 | 3 |
| 311 | do. | do. | 5 | 45 | 45 | 45 | 45 | 40 | 6 | 5 | 5 | 4 | 5 |
| 312 | do. | do. | 3½ | 45 | 45 | 45 | 45 | 45 | 1 | ..... | ..... | 3 | 3 |
| 313 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 2½ | 2 | 2½ | 2½ |
| 314 | do. | do. | 3½ | 45 | ..... | ..... | ..... | ..... | 1 | 2 | ..... | ..... | ..... |
| 315 | do. | do. | 5 | 47½ | 47½ | 47½ | 45 | 45 | 0 | 0 | 0 | 0 | 0 |
| 316 | do. | do | 4 | 50 | 50 | 50 | 50 | 50 | 4 | 8 | 8 | 8 | ..... |
| 317 | do. | do. | 3½ | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... |
| 318 | do. | do. | 3 | 45 | 48 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 319 | do. | do. | 4 | 45 | 45 | 34 | 30 | ..... | 0 | 1 | 1 | 1 | 1 |
| 320 | Ireland, | do. | 3 | 45 | 45 | 45 | ..... | ..... | 0 | 0 | ..... | ..... | ..... |
| 321 | United States, | do. | 5 | 40 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 322 | England | do. | 7 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 323 | United States, | do. | 4½ | 45 | 45 | 50 | 45 & 50 | 45 | 4 | ..... | ..... | ..... | ..... |
| 324 | do. | do. | 2¾ | 45 | 45 | 45 | 45 | 40 | 4 | ..... | 4 | 4 | ..... |
| 325 | do. | do. | 3 | 45 | 45 | 40 | 40 | 40 | 3 | ..... | ..... | ..... | ..... |

* A contractor.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA.—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship. If so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 326 | United States. | Bricklayer. | years. | 45 cts. | 45 cts. | 45 cts. | 45 cts. | 45 cts. | 2 months. | 4 months. | 1 months. | ..... | ..... |
| 327 | do. | do. | 4 | 35 | 35 | 45 | 45 | 40 | 3 | 5 | 5 | 5 months. | 5 months. |
| 328 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 329 | do. | do. | 3½ | 45 | 45 | 45 | 45 | 40 | 3 | 4½ | ..... | ..... | ..... |
| 330 | England. | do. | 3 | 35 | 45 | 45 | 45 | ..... | 3 | 3 | ..... | ..... | ..... |
| 331 | United States. | do. | 2 | 45 | 45 | 45 | 45 | 45 | 3 | ..... | 0 | ..... | ..... |
| 332 | do. | do. | 3 | 35 | 45 | 45 | 45 | 45 | 5 | 4 | 4 | ..... | ..... |
| 333 | do. | do. | 3 | 45 | 45 | 45 | ..... | ..... | 1 | 1 | ..... | ..... | ..... |
| 334 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 1 | 3 | 5 | 1 | 3 |
| 335 | do. | do. | 4 | 45 | 45 | ..... | ..... | ..... | 3 | 4 | 4 | ..... | ..... |
| 336 | do. | do. | 3½ | 35 | 35 | 35 | 35 | 35 | 4 | 6 | ..... | ..... | ..... |
| 337 | England. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 4 | 6 | 3 | 6 | ..... |
| 338 | United States. | do. | 2 | 45 | 45 | ..... | ..... | ..... | 2 | 4 | 4 | ..... | ..... |
| 339 | do. | do. | 4 | 45 | 45 | 45 | 45 | ..... | 1 | 2 | 2 | 1 | ..... |
| 340 | do. | do. | 5 | 33⅓ | 33⅓ | 33⅓ | 45 | 48 | 0 | 0 | 0 | ..... | ..... |
| 341 | do. | do. | 4 | 50 | 47 | 47 | 40 | 40 | 3 | 8 | 4 | 4 | 4 |
| 342 | do. | do. | 5 | 33⅓ | 38¾ | 45 | 45 | 45 | 2 | 3 | ½ | ½ | ½ |
| 343 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 0 | ..... | ..... | ..... | ..... |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 344 | Germany | do | 3 | 45 | 45 | 47½ | 47½ | 47½ | 3 | 3 | 2 | 3 | 3 |
| 345 | England | do. | 7 | 45 | 45 | 45 | 45 | 45 | 6 | 5 | 5 | 5 | 5 |
| 346 | United States | do. | 4 | 45 | 45 | 45 | ..... | ..... | 0 | ..... | ..... | 4 | 1 |
| 347 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 0 | 3 | 5 | 1 | 3 |
| 348 | England | do. | 3½ | 45 | 45 | 45 | 45 | ..... | 5¾ | 3 | 3 | 2 | ..... |
| 349 | United States | do. | 4 | 45 | 53 | 53 | 53 | 53 | ½ | ½ | ½ | ½ | 6 |
| 350 | do. | do. | 4¼ | 45 | 45 | 45 | 30 | 30 | 3 | 4 | 3 | 4 | 4 |
| 351 | do. | do. | 3½ | 33⅓ | 33⅓ | 33⅓ | 33⅓ | 33⅓ | 3 | 4 | 4 | 8 | 6 |
| 352 | do. | do. | 5 | 45 | 45 | 45 | 40 | 40 | ..... | ..... | ..... | ..... | ..... |
| 353 | England | do. | 4 | 45 | 45 | 45 | 40 | ..... | ..... | ..... | ..... | ..... | ..... |
| 354 | do. | do. | 7 | 45 | 45 | 45 | 45 | 40 | 4 | 3 | 3 | 3½ | 3½ |
| 355 | United States | do. | 3 | 45 | 45 | 40 | 40 | 40 | 0 | 4 | 4 | 4 | 4 |
| 356 | England | do. | 5 | 45 | 45 | 45 | 40 | 40 | 0 | 0 | 0 | 0 | 0 |
| 357 | United States | do. | 4 | 47½ | ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... |
| 358 | England | do. | 5 | 45 | 45 | 45 | 45 | 45 | 2 | 2 | 2 | 2 | 2 |
| 359 | United States | do. | 4 | 45 | 45 | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... |
| 360 | do. | do. | 3 | 45 | 45 | 30 | 40 | 40 | 2 | 6 | 6 | 6 | 6 |
| 361 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 5 | 8 | 8 | 8 | 8 |
| 362 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 2 | 2 | 1 | 2 |
| 363 | do. | do. | 5 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 364 | do. | do. | 3½ | 45 | 45 | 45 | 45 | 40 | 6 | 2 | 1 | 1 | ..... |
| 365 | do. | do. | 3¼ | 45 | 45 | 45 | 45 | 45 | 2 | 4 | 4 | 4 | 4 |
| 366 | do. | do. | 5½ | 45 | 45 | 45 | 40 | 40 | 6 | 12 | 3 | 3 | 2 |
| 367 | do. | do. | 3½ | 45 | 45 | ..... | ..... | ..... | 5 | ..... | ..... | ..... | ..... |
| 368 | do. | do. | 6 | 45 | 45 | 45 | 40 | 40 | 0 | 6 | ..... | ..... | ..... |
| 369 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 2 | 3 | 3 | 3 | 3 |
| 370 | do. | do. | 4½ | 45 | 45 | 45 | 45 | 40 | 3 | 7 | 5 | 4 | 6 |
| 371 | do. | do. | 4 | 45 | 45 | 45 | 45 | 40 | 4 | ..... | ..... | ..... | ..... |
| 372 | do. | do. | 3 | 45 | 45 | 45 | ..... | ..... | 2 | 2 | 1 | ..... | ..... |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 373 | United States. | Bricklayer. | 4 years. | 45 cts. | 45 cts. | 45 cts. | | | | | | | |
| 374 | do. | do. | 3 | 45 | 45 | 45 | 45 cts. | 45 cts. | months. | 4 months. | 3 months. | 3 months. | mo hs. |
| 375 | do. | do. | 3 | 45 | 45 | 45 | 45 | | | 4 | | | |
| 376 | do. | do. | 4 | | 45 | 45 | 45 | 45 | 6 | | | | |
| 377 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 4 | 2 |
| 378 | do. | do. | 4 | 45 | 45 | 45 | | | 6 | 12 | | | |
| 379 | do. | do. | 4 | 45 | | | | | | | | | |
| 380 | do. | do. | 3 | 27½ | 32½ | 30 | 30 | 30 | 4 | 2 | 3 | 3 | 3 |
| 381 | do. | do. | 7 | | | | | | | | | | |
| 382 | do. | do. | 4 | 45 | 45 | 45 | 40 | | 1 | | | | |
| 383 | do. | do. | 4½ | 45 | 45 | 45 | 45 | 45 | 4 | 3 | 5 | 4 | 4 |
| 384 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 0 | 3 | 2 | 4 | |
| 385 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 0 | | | | |
| 386 | do. | do. | 4 | 55½ | 45 | 45 | 45 | 45 | 2½ | 4 | 3½ | 3½ | 4 |
| 387 | do. | do. | 3½ | 45 | | | | | 2 | 4 | 4 | 4 | |
| 388 | England. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 1 | | | | |
| 389 | do. | do. | 6 | 45 | 45 | 45 | 39 | 39 | 4 | | | | |
| 390 | do. | do. | 7 | 45 | 45 | 45 | 40 | 40 | 1 | 1 | 1 | 1 | 1 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 391 | do | do. | 3 | 36 | 40 | 40 | 45 | 45 | 3 | 5 | 5 | 5 | 4 |
| 392 | do. | do. | 4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 393 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 8 | 8 | 5 | 6 |
| 394 | do. | do. | 3¼ | 45 | 45 | 45 | 45 | 45 | 3 | 6 | 4 | 6 | 5 |
| 395 | do. | do. | 5 | 45 | ..... | ..... | ..... | ..... | 3 | 6 | 6 | 6 | 6 |
| 396 | do. | do. | 3 | 47½ | 50 | 47½ | 47½ | 45 | 0 | 0 | 2 | 3 | 2 |
| 397 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 398 | do. | do. | 4 | 28 | 33⅓ | 45 | 42 | 42 | ..... | ..... | ..... | ..... | ..... |
| 399 | do. | do. | 5 | 37 | 37 | 37 | 37 | 37 | 0 | 0 | 0 | 0 | 0 |
| 400 | do. | do. | 5 | 45 | 45 | 45 | 40 | 40 | 2 | 3 | 3 | 3 | 3 |
| 401 | do. | do. | 4 | 45 | 45 | 40 | ..... | ..... | 2 | 3 | ..... | ..... | ..... |
| 402 | do. | do. | 4½ | 45 | 45 | 45 | 40 | 40 | 4 | 4 | 4 | 4 | 4 |
| 403 | do. | do. | 3½ | 45 | 45 | 45 | 45 | 45 | 2 | 1 | 1 | 1 | ..... |
| 404 | do. | do. | 4 | 45 | 45 | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... |
| 405 | do. | do. | 4 | 45 | 45 | 45 | ..... | ..... | 5 | ..... | ..... | ..... | ..... |
| 406 | do. | do. | 4 | 45 | 62½ & 45 | 50 | ..... | ..... | 0 | 3 | 0 | ..... | ..... |
| 407 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 0 | 4 | 4 | 4 | 4 |
| 408 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 409 | do. | do. | 4 | 40 | 45 | 30 | 30 | 30 | 5 | 4 | 4 | 4 | 4 |
| 410 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 3 | 3 |
| 411 | do. | do | 4 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 412 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 5 | 3 | 4 | 4 | 4 |
| 413 | do. | do. | 3 | 45 | 45 | 45 | ..... | ..... | 4 | 3 | 3 | 3 | 3 |
| 414 | do. | do. | 4 | 45 | 45 | 40 | 40 | 40 | 3 | ..... | ..... | ..... | ..... |
| 415 | do. | do. | 4 | 45 | 45 | 45 | 45 | 40 | 2 | 2 | 2 | 4 | 1 |
| 416 | do | do. | 3½ | 47 | 47 | 50 | 50 | 47 | 3 | 4 | 5 | 3 | ..... |
| 417 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 418 | do. | do | 5 | 45 | 45 | 45 | 45 | 45 | 6 | 6 | 0 | 0 | 0 |
| 419 | do. | do. | 4 | 45 | 45 | 40 | 40 | 40 | 3 | 3 | 3 | 3 | 4 |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 420 | United States | ick | years | 45 cts. | 45 cts. | 45 cts. | 45 cts. | 45 cts. | ..... | ..... | ..... | ..... | ..... |
| 421 | Ireland | do. | 3 | 45 | 45 | 45 | 45 | 45 | ..... | 2 months | 3 months | 3 months | 3 months |
| 422 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 4 months | 3 | 3 | 3 | 3 |
| 423 | England | do. | 4 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 424 | Scotland | do. | 5 | 45 | 45 | 30 | 25 | 25 | 4 | 3 | 0 | 0 | 0 |
| 425 | England | do. | 7 | 45 | 45 | 45 | 40 | 40 | 1 | 1 | 1 | 1 | 1 |
| 426 | do. | do | ..... | 45 | ..... | ..... | ..... | ..... | 3 | ..... | ..... | ..... | ..... |
| 427 | United States | do. | 3 | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 3 | 3 |
| 428 | do. | do. | 4½ | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 3 | 3 |
| 429 | do. | do. | 3 | 35 | 35 | 35 & 40 | 45 | 45 | 3 | ..... | ..... | ..... | ..... |
| 430 | do. | do. | 3 | 27 | 33⅓ | 45 | 45 | 45 | 3 | 7 | 6 | 8 | 0 |
| 431 | do. | do. | 3 | 45 | 45 | 47⅞ | 45 | 45 | 2½ | 3 | 3 | 4 | 1 |
| 432 | do. | do. | 4 | 45 | 45 | 40 | ..... | ..... | 5 | ..... | ..... | ..... | ..... |
| 433 | Russia | do. | 5 | 45 | 45 | 45 | 45 | 45 | 3 | 1 | 0 | 0 | 0 |
| 434 | United States | do. | 4½ | 45 | 45 | 45 | ..... | ..... | 4 | 1 | ..... | ..... | ..... |
| 435 | England | do. | 7 | 45 | 45 | 45 | 45 | ..... | 2 | 2 | 2 | 3 | 2 |
| 436 | United States | do. | 4 | 45 | 45 | 22½ | 22½ | 15 | 2 | 1 | 0 | 0 | 0 |
| 437 | do. | do. | 3 | 45 | 45 | 40 | 40 | 40 | 3 | 3 | 3 | 3 | 3 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 438 | England. . . . . | do. . . | 7 . . . | 45 . . | 45 . . | 45 . . | 45 . | 45 . . | 0 . . | 0 | 0 | 0 | 0 |
| 439 | United States. . | do . . | 4½ . . . | 45 . . . | 45 . . | 45 . . | 45 . . | 45 . . | . . . . . | 3 | 3 | 3 | 3 |
| 440 | do. . | do. . . | 3 . . . | 45 . . | 45 . . | 30 . . | . . . . . | . . . . . | 3 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 441 | England. . . . . | do. . . | 6 . . . | 45 . . | 45 . . | 45 . . | 40 . . | 40 . . | 0 . . | 2 | 2 | . . . . . | 3 |
| 442 | United States. . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 443 | do. . | do. . . | 3½ . . . | 45 . . | 45 . . | 45 . . | 45 . . | . . . . . | 0 . . | 0 | 3 | 1 | . . . . . |
| 444 | do. . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 445 | England. . . . . | do. . . | 5 . . . | 45 . . | 45 . . | 45 . . | 45 . | 45 . . | 2 . . | 1 | 4 | 3 | 5 |
| 446 | United States. . | do. . . | 3½ . . . | 45 . . | 45 . . | 40 . . | 40 . . | 40 . . | 6 . . | 3 | 4 | 2 | 4 |
| 447 | do. . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 1 . . | 1 | . . . . . | . . . . . | . . . . . |
| 448 | do. . | do. . . | 4 . . . | 50 . . | 45 . . | 45 . . | 45 . . | 25 . . | 0 . . | 0 | 0 | 0 | 0 |
| 449 | do. . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 450 | do. . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 3 . . | 2 | 4 | 5 | 3 |
| 451 | do. . . | do. . . | 4 . . . | 45 . . | 40 . . | 40 . . | 40 . | 40 . . | 1 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 452 | do. . . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 2 . . | 3 | 3 | 3 | 3 |
| 453 | Ireland. . . . . | do. . . | 5 . . . | 45 . . | 45 . . | 40 . . | 40 . . | 40 . . | 3 . . | 3 | 2 | 1 | 2 |
| 454 | Scotland. . . . . | do. . . | 5 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 2 . . | 4 | 4 | 4 | 4 |
| 455 | United States. . | do. . . | 2 . . . | 45 . . | 45 . . | 40 . . | 40 | 40 . . | . . . . . | 3 | . . . . . | . . . . . | . . . . . |
| 456 | Ireland. . . . . | do. . . | 5 . . . | 45 . . | 45 . . | 40 . . | 40 . . | 40 . . | 4½ . . | 6 | 4 | 4 | 5 |
| 457 | United States. . | do. . . | 3½ . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 3 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 458 | Australia. . . . | do. . . | 5 . . . | 45 . . | 45 . . | 50 . . | 50 . . | 50 . . | 2 . . | 4 | 4 | 4 | 4 |
| 459 | United States. . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 0 . . | 0 | 0 | 0 | 0 |
| 460 | do. . . | do. . . | 3 . . . | 27 . . | 30 . . | 30 . . | . . . . . | . . . . . | 3 . . | 2 | 0 | . . . . . | . . . . . |
| 461 | do. . . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 2 . . | 5 | 6 | 8 | 6 |
| 462 | do. . . | do. . . | 4 . . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | 4 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 463 | do. . . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 3 . . | 5 | 4 | 4 | 4 |
| 464 | do. . . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 2½ . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 465 | do . . | do. . . | 4 . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 0 . . | 0 | 0 | 0 | 0 |
| 466 | do . . . | do. . . | 5 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 3 . . | 3 | 3 | 3 | 3 |

## WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 467 | United States, | Bricklayer, | 4 years, | 45 cts. | 45 cts. | 45 cts. | 45 cts. | 45 cts. | ..... | ..... | ..... | ..... | ..... |
| 468 | Ireland, | do. | 3⅞ | 45 | 45 | 45 | 45 | 45 | 2½ months | [illegible] nths, | ..... | ..... | ..... |
| 469 | United States, | do. | 4 | 45 | 45 | 45 | 45 | 40 | 4 | 3 | months, | 3 months, | 3 months. |
| 470 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | | 4 | 4 | 4 | 4 |
| 471 | Scotland, | do. | 5½ | 45 | 45 | 45 | 45 | 40 | 3 | 4 | 3 | 2 | 3 |
| 472 | Ireland, | do. | 5 | 45 | 45 | 40 | 40 | 40 | 3 | 3 | 2 | 1 | 2 |
| 473 | England, | do. | 6 | 45 | 45 | 45 | 45 | 40 | 4 | 3 | 3 | 1½ | 3 |
| 474 | United States, | do. | 3 | 45 | ..... | ..... | ..... | ..... | 0 | 0 | 0 | 6 | 0 |
| 475 | Germany, | do. | 3 | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 3 | 3 |
| 476 | United states, | do. | 4 | 45 | 45 | 45 | ..... | ..... | 3 | 3 | 3 | 3 | 3 |
| 477 | do. | do. | 4 | 50 | 50 | 50 | 50 | 50 | 3 | 3 | 3 | 3 | 3 |
| 478 | Scotland, | do. | 5 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 479 | England, | do. | 5 | 45 | ..... | ..... | ..... | ..... | 0 | ..... | ..... | ..... | ..... |
| 480 | United States, | do. | 5½ | 45 | 45 | 40 | 40 | 40 | 3 | 3 | 2 | 2 | 2 |
| 481 | United States, | do. | 3¼ | 45 | 45 | 40 | 40 | 40 | 3 | 3 | 3 | 3 | 3 |
| 482 | Germany, | do. | 3 | 45 | 45 | 39 | 39 | 39 | 6 | 6 | 3 | 6 | 6 |
| 483 | United States, | do. | 3⅞ | 45 | 45 | 45 | 45 | 45 | 2 | 4 | 4 | 4 | 4 |
| 484 | do. | do. | 2 | 50 | 45 | 45 | 45 | 45 | 3 | 6 | 6 | 6 | 6 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 485 | do | do. | 4 | 45 | 45 | ..... | ..... | ..... | 0 | 3 | ..... | ..... | ..... |
| 486 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 3 | 3 |
| 487 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 0 | 0 | 0 |
| 488 | do. | do. | 2 | 45 | 45 | 45 | 45 | 40 | ..... | ..... | ..... | ..... | ..... |
| 489 | do. | do. | 4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 490 | do. | do. | 7 | 45 | 50 | 50 | 60 | 60 | 3 | 6 | 2 | 1½ | 1½ |
| 491 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 1 | ..... | ..... | ..... | ..... |
| 492 | do. | do. | 3 | 45 | 45 | 45 | 40 | 40 | 4 | 5 | 6 | 3 | 4 |
| 493 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 5 | ..... | ..... | ..... | ..... |
| 494 | do. | do. | 5 | 45 | 45 | 45 | 30 | 30 | 4 | 4 | 4 | 4 | 4 |
| 495 | do. | do. | ..... | 30 | 35 | 35 | 30 | 40 | 3 | 5 | 4 | 5 | 6 |
| 496 | do. | do. | 3 | 45 | 45 | 45 | 50 | 50 | 0 | 4 | 0 | 0 | 0 |
| 497 | do. | do. | 4 | 45 | 45 | 45 | 45 | 40 | ..... | 2 | ..... | ..... | ..... |
| 498 | do. | do. | 3 | 45 | 45 | 50 | 50 | 50 | ..... | ..... | ..... | ..... | ..... |
| 499 | do. | do. | 4½ | 45 | 45 | 45 | 45 | 45 | 5 | 0 | 0 | 3 | ..... |
| 500 | do. | do. | 3 | 45 | 40 | 40 | 40 | 40 | ..... | ..... | ..... | ..... | ..... |
| 501 | do. | do. | 4 | 45 | ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... |
| 502 | England, | do. | 3 | 45 | 45 | 45 | 40 | 40 | 2 | 6 | 6 | 6 | 6 |
| 503 | do. | do | 2 | 45 | 45 | 45 | 45 | 45 | 3½ | 5 | 2 | 1 | 2 |
| 504 | Scotland, | do. | 6½ | 45 | 45 | 45 | 45 | 40 | 4 | 3 | 3 | 2 | 3 |
| 505 | England, | do. | 3 | 45 | 45 | 45 | 45 | 45 | 3 | ..... | ..... | ..... | ..... |
| 506 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 0 | 3 | 1 | ..... |
| 507 | Scotland, | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | ..... | ..... |
| 508 | Ireland, | do. | 4 | 50 | 50 | 50 | 50 | 50 | 2 | 4 | 4 | 1 | 4 |
| 509 | United States, | do. | 7 | 45 | 45 | 40 | 40 | 40 | 5 | ..... | ..... | ..... | ..... |
| 510 | do. | do. | 4 | 45 | 45 | 45 | 45 | ..... | 4 | 5 | 5 | 5 | 5 |
| 511 | United States, | do. | 4 | 45 | 45 | ..... | ..... | ..... | 2 | 2 | ..... | ..... | ..... |
| 512 | do. | do. | 4 | 45 | 45 | 45 | 45 | 40 | 4 | 3 | 3 | 3 | ..... |
| 513 | do | do | 4½ | 45 | 45 | 45 | 45 | 45 | 4 | 4 | 4 | 4 | 4 |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 511 | United States. | Bricklayer. | 4 years. | 45 cts. | ..... | ..... | ..... | ..... | 3 months. | ..... | ..... | ..... | ..... |
| 515 | do. | do. | 4 | 45 | 45 cts. | 45 cts. | 45 cts. | 45 cts. | 1½ | ..... | ..... | ..... | ..... |
| 516 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 517 | do. | do. | 4 | 45 | 47 | 40 | 40 | 40 | 1 | ..... | ..... | 1 month. | 1 month, |
| 518 | Turkey. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 3 | 6 months, | 4 months | 3 | 1 |
| 519 | Germany. | do. | 3 | 45 | 45 | 50 | 55 | 55 | 5 | 7 | 6 | 4 | 2 |
| 520 | England. | do. | 5 | 45 | 45 | 45 | 40 | 40 | 3 | 3 | 3 | 3 | 3 |
| 521 | Ireland. | do. | 5 | 25 &30 | 40 | 45 | 50 | 50 | 6 | 9 | 12 | ..... | ..... |
| 522 | Scotland. | do. | 4 | 45 | 45 | 45 | ..... | ..... | 3 | 3 | 3 | ..... | ..... |
| 523 | United States. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 1 | 1 | 1 | 1 | ..... |
| 524 | do | do. | 5 | 45 | 45 | 45 | 45 | 45 | 3 | 4 | 4 | 4 | 4 |
| 525 | do. | do. | 4 | 40 | 40 | 40 | 40 | 40 | 0 | 0 | 1½ | 0 | 0 |
| 526 | do. | do. | 4 | 45 | 45 | 45 | 45 | 40 | 2 | 2 | 2 | 2 | 2 |
| 527 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 528 | Germany. | do. | 3 | 45 | 45 | 45 | 40 | 35 | 2 | 4 | 4 | 4 | 4 |
| 529 | United States | do. | 3 | 45 | 45 | 45 | 40 | 40 | 3 | 4 | 4 | 4 | 4 |
| 530 | do | do. | 3 | 45 | 45 | 36 | 36 | 36 | 3 | 2 | 0 | 0 | 3 |
| 531 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 4 | ..... | ..... | ..... | 6 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 532 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 3 | 4 | 0 | 0 | 4 |
| 533 | England | do. | Yes. | 45 | 39 | 39 | 34 | 34 | 0 | 0 | 0 | 0 | 0 |
| 534 | United States. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 4 | 4 | 4 |
| 535 | do. | do. | 4 | 45 | 45 | 45–50 | 45 | 45 | 6 | 2 | 3 | 3 | 4 |
| 536 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 6 | 6 | 5 | 4 | 4 |
| 537 | Ireland, | do. | 4½ | 28 | 47 | 50 | 50 | 50 | ..... | 2 | 1½ | 2 | 2 |
| 538 | England. | do. | 5 | 35 | 45 | 45 | 50 | 50 | 2 | 4 | 4 | 4 | 4 |
| 539 | United States. | do. | 4 | 45 | 50 | 50 | 47½ | 47½ | 0 | 2 | 1 | 2 | 1 |
| 540 | do. | do. | 4 | 45 | 45 | 45 | 45 | 40 | 2 | 2 | 2 | 0 | 0 |
| 541 | do. | do. | 4 | 45 | 45 | 45 | ..... | ..... | 3 | 3 | 3 | ..... | ..... |
| 542 | do | do. | 4 | 45 | 45 | 40 | 40 | 40 | 0 | 0 | 6 | 6 | 6 |
| 543 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 6 | 6 | 6 | 2 |
| 544 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 4 | 2 | 3 | 2 | 2 |
| 545 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 3 | 3 | 3 | 3 |
| 546 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 4 | 8 | 6 |
| 547 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 0 | ..... | ..... |
| 548 | do. | do. | 3 | 50 | 50 | 50 | 50 | 50 | 0 | 0 | 0 | 0 | 0 |
| 549 | do. | do. | 4½ | ..... | ..... | ..... | ..... | ..... | 1 | 12 | 0 | 12 | 12 |
| 550 | do. | do. | 4 | 40 | 45 | ..... | ..... | ..... | 0 | ..... | ..... | ..... | ..... |
| 551 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 2 | 2 | 2 | 2 |
| 552 | do. | do. | 4 | 45 | ..... | ..... | ..... | ..... | 3 | ..... | ..... | ..... | ..... |
| 553 | do. | do. | 3 | 45 | 45 | 45 | 45 | 40 | 3 | ..... | ..... | ..... | ..... |
| 554 | do. | do. | 5 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 555 | do. | do. | 4 | 45 | 45 | 45 | 45 | 40 | 4 | 4 | 4 | 4 | 4 |
| 556 | do. | do. | 4 | 45 | 40 | 40 | 40 | 40 | 5 | 6 | 6 | 6 | 6 |
| 557 | do. | do. | 5 | 45 | ..... | ..... | ..... | ..... | 0 | 0 | 0 | 0 | 0 |
| 558 | do. | do. | 4 | 45 | ..... | ..... | ..... | ..... | 4 | ..... | ..... | ..... | ..... |
| 559 | do. | do. | 3 | 30 | 30–45 | 45 | 40 | 40 | 3 | 4 | 4 | 4 | 4 |
| 560 | do. | do. | 5¼ | 45 | 28 | 20 | 18 | 12 | 0 | 0 | 0 | 0 | 0 |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation | Did you serve an apprenticeship, if so, how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 561 | United States, | Bricklayer. | 3½ yrs. | 28 cts. | 47 cts. | 50 cts. | 50 cts. | 50 cts. | 4 months, | 2 months, | 2 months, | 3 months, | 4 months. |
| 562 | do. | do. | 3 | 45 | ..... | ..... | ..... | ..... | 0 | 3 | ..... | ..... | ..... |
| 563 | do. | do. | 4 | 47 2-9 | 50 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 564 | do. | do. | 3 1-6 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 565 | do. | do. | 4 | 45 | 45 | 50 | 50 | 50 | 0 | 0 | 0 | 0 | 0 |
| 566 | do. | do. | 4½ | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 0 | 0 |
| 567 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 0 | 0 | 0 |
| 568 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 4 | 4 | 4 | 4 | 4 |
| 569 | do. | do. | 4 | 45 | 45 | 45 | 45 | ..... | 3 | ..... | ..... | ..... | ..... |
| 570 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 0 | 0 | 0 |
| 571 | Scotland. | do. | 3½ | 50 | 50 | 50 | 50 | 50 | 0 | 0 | 2 | 2 | 2 |
| 572 | Wales, | do. | 3 | 45 | 45 | ..... | ..... | ..... | 5 | 6 | ..... | ..... | ..... |
| 573 | England, | do. | 5 | 45 | 45 | 45 | 45 | 45 | 2 | ..... | ..... | ..... | ..... |
| 574 | do. | do. | 2½ | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 3 | 3 |
| 575 | Denmark, | do. | 3 | 45 | 45 | 45 | 45 | 40 | 3 | 5 | 4 | 6 | 5 |
| 576 | Ireland, | do. | 4 | 45 | 45 | 45 | 45 | 45 | 5 | 5 | 4 | 2 | 12 |
| 577 | Scotland, | do. | 7 | 45 | 45 | 45 | 45 | 50 | 1 | 1 | 1½ | 0 | ½ |
| 578 | Ireland. | do. | 6 | 23 | 25 | 25 | 30 | 35 | 6 | 5 | 5 | 6 | 6 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 579 | England. . . . . | do. . . | 6 . . . | 45 . . | 45 . . | 45 . . | . . . . . | . . . . . | 3 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 580 | do. . . . . | do. . . | 7 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 6 . . | 12 | . . . . . | . . . . . | . . . . . | . . . . . |
| 581 | United States. . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 0 . . | 2 | 2 | 2 | 2 | |
| 582 | do. . | do. . . | 4 . . . | 45 . | 45 . . | 45 . . | 45 . . | 45 . . | 3 . | 4 | 4 | 4 | 4 | |
| 583 | do. . | do. . . | 5 . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 584 | do. . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 4 . . | 4 | 4 | 4 | 4 | |
| 585 | do. . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 40 . . | 3 . . | 2 | 2 | 4 | 4 | |
| 586 | do. . | do. . | 4 . . . | 35 . . | 40 . . | 40 . . | 45 . . | 45 . | 3½ . . | 4 | 2 | 2 | 2 | |
| 587 | England. . . . . | do. . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 588 | Germany. . . . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 3 . . | 5 | 5 | 5 | 5 | |
| 589 | United States. . | do. . . | 3 . . . | 33 . . | 39 . . | 33 . . | 33 . . | 33 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 590 | do. . | do. . . | 3 . . . | 45 . . | 48 . . | 48 . . | 45 . . | 45 . . | 2 . . | 4 | 4 | 4 | 4 | |
| 591 | do . | do. . . | 4 . . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | 2 . . | . . . . . | . . . . . | . . . . . | . . . . | |
| 592 | England. . . . . | do. . | 5 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 3 . . | 4 | 6 | 6 | 5 | |
| 593 | United States. . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | . . . . . | . . . . . | 3 . . | 5 | 4 | 4 | . . . . . | |
| 594 | do. . | do. . . | 3 . . . | 45 . . | 45 . . | 45 . . | 42½ . . | 40 . . | . . . . . | 3 | 3 | 3 | . . . . . | |
| 595 | do. . | do. . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | |
| 596 | England, . . . . | do. . . | 7 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 40 . . | 3½ . . | 5 | 5 | 4 | 5 | |
| 597 | United States, . | do. . | 4 . . . | 45 . . | 45 . . | 45 . | 45 . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 598 | England. . . . . | do. . . | 3 . . . | 45 . . | 45 . . | 40 . . | 40 . . | 40 . . | 4½ . . | ½ | . . . . . | . . . . . | . . . . . | . . . . . |
| 599 | United States. | do. . | 3 . . . | 45 . . | 45 . . | 45 . | 45 . . | 45 . . | 4 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 600 | do. . | do . . . | 4 . . . | 45 . . | 45 . . | 45 . . | 45 . . | 45 . . | 0 . . | 0 | 0 | 3 | 1 | |
| 601 | do. . | do. . | 5 . . . | 45 . . | 45 . | 45 . | 45 . | 45 . . | 4 . . | 3 | 0 | 0 | 1 | |
| 602 | do. . | do . . . | 3 . . . | 45 . | 45 . . | 45 . | . . . . . | . . . . . | 2 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 603 | do. . | do. . . | 4 . . . | 45 . | 45 . | 45 . . | 45 . . | 45 . . | 2 . . | 0 | 0 | 0 | 0 | |
| 604 | do. . | do. . . | 4 . . . | 40 . | 45 . . | 45 . . | 47 . . | . . . . . | 1 . . | 0 | 0 | 0 | 0 | |
| 605 | do. . | do. . . | 5 . . . | 45 . | 45 . . | 45 . . | 45 . . | 45 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 606 | do. . | do. . . | 3½ . . . | 45 . . | 45 . . | 45 . . | . . . . . | . . . . . | 3 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 607 | do. . | do. . | 4 . . . | 45 | 45 . | 40 . . | . . . . . | . . . . . | 5 . . | 2 | . . . . . | . . . . . | . . . . . | . . . . . |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship. If so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 608 | United States, | Bricklayer, | 4½ years, | 45 cts., | cts., | 45 cts., | ..... | ..... | 4 months, | 3 months, | ..... | ..... | ..... |
| 609 | do. | do. | 7 | 45 | ..... | ..... | ..... | ..... | 6 | ..... | ..... | ..... | ..... |
| 610 | do. | do. | 3 | 45 & 35 | ..... | ..... | ..... | ..... | 4 | 6 | 5 months, | ..... | ..... |
| 611 | do. | do. | 4 | 45 | 45 | 45 | 45 cts., | 40 cts., | ..... | ..... | ..... | ..... | ..... |
| 612 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 1 | 1 | 1 | month, | 1 month, |
| 613 | do. | do. | 4 | 45 | 45 | 45 | 45 | 40 | 3 | 6 | 6 | 6 | 6 |
| 614 | do. | do. | 3 | 47 | 30 | 27 | 27 | 25 | 2 | 4 | 4 | 4 | 4 |
| 615 | do. | do. | 4 | 45 | 40 | 35 | 35 | 23 | 6 | ..... | ..... | ..... | ..... |
| 616 | do. | do. | 3½ | 45 | 45 | 45 | 45 | 40 | 3 | 2 | 3 | 2½ | 3 |
| 617 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 4 | 2 | 2 | 3 | ..... |
| 618 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | ..... | ..... | ..... | ..... |
| 619 | do. | do. | 4 | 45 | 45 | 45 | ..... | ..... | 6 | 7 | ..... | ..... | ..... |
| 620 | do. | do. | 4 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... |
| 621 | do. | do. | 4 | 45 | 45 | ..... | ..... | ..... | 1¼ | 0 | ..... | ..... | ..... |
| 622 | do. | do. | 4⅝ | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 623 | do. | do. | 3 | 45 | 45 | 45 | 40 | 40 | 2 | 2 | 2 | 2 | 2 |
| 624 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 0 | 0 | 0 |
| 625 | do. | do. | 3½ | 47 | 45 | 45 | 45 | 45 | ½ | 3 | 3 | 4 | 0 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 626 | do | do | 4 | 45 | 45 | 45 | 45 | 45 | 1½ | ..... | ..... | ..... | ..... |
| 627 | do. | do. | 4 | 45 | 45 | 40 | 40 | 40 | ..... | ..... | ..... | ..... | ..... |
| 628 | do. | do. | 3 | 45 | 45 | 45 | 40 | 40 | 4 | 6 | 6 | 7 | 7 |
| 629 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 5 | 3 | ..... | ..... | ..... |
| 630 | do. | do. | 3 | 25 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 3 | 3 |
| 631 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 1 | 1 | 1 | 0 |
| 632 | Englan | do. | 4 | 45 | 45 | 40 | 40 | 40 | ..... | ..... | ..... | ..... | ..... |
| 633 | Ireland. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 1½ | 7 | 5 | 7 | 3 |
| 634 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 0 | 0 | 0 |
| 635 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 2 | 4 | 4 | 8 | 4 |
| 636 | do | do. | 3 | 45 | 45 | 45 | 40 | 40 | 1 | ..... | ..... | ..... | 3 |
| 637 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 638 | do | do. | Yes, | 55 5-9 | 55 5-9 | 50 | 50 | 50 | 1 | ..... | ..... | ..... | ..... |
| 639 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 4 | 4 | 4 | 4 |
| 640 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 3 | 3½ | 3½ | 0 |
| 641 | do. | do. | 4 | 45 | 45 | 45 | 45 | ..... | 0 | 0 | 0 | 0 | ..... |
| 642 | do. | do. | 5 | 45 | 45 | 40 | 39 | 36 | 3 | 3 | 3 | 3 | 3 |
| 643 | England, | do. | 5 | 45 | 45 | 45 | 45 | 45 | 2 | 2 | 1 | 2 | 3 |
| 644 | do. | do. | 7 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 645 | do. | do. | 7 | 39 | 45 | 45 | 45 | 45 | 0 | 4 | 4 | 4 | 4 |
| 646 | do. | do. | 7 | 45 | 45 | 45 | 40 | 40 | 3 | 3 | 3 | 3 | 3 |
| 647 | do. | do | 7 | 45 | 45 | 45 | 45 | 40 | 3 | 3 | 3 | 3 | 3 |
| 648 | do. | do. | 5½ | 45 | 45 | 45 | 45 | 25 | 2 | ..... | ..... | ..... | ..... |
| 649 | do. | do. | 4 | 45 | 45 | 45 | 45 | 40 | 1 | ..... | ..... | ..... | ..... |
| 650 | do. | do. | 3½ | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 651 | do. | do. | 6½ | 45 | 45 | 45 | 45 | 45 | 2 | 1 | 2 | 2 | 2 |
| 652 | o. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 1 | 0 | 3 | 4 | 3 |
| 653 | o. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 3 | 4 | 1 | 1 | 4 |
| 654 | Russia. | do. | 8 | 45 | 45 | 45 | 40 | 40 | ..... | ..... | ..... | ..... | ..... |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 655 | German | Bricklayer | 5 years | c | 45 cts | 45 cts. | ..... | ..... | 0 months | 2 months, | 2 mon | ..... | ..... |
| 656 | do. | do. | ... | 45 | 45 | 40 | 40 cts. | 40 cts. | 4 | 3 | 4 | 3 m nths, | months, |
| 657 | do. | do. | ... | 45 | 45 | 25 | 25 | 25 | 2 | 3 | 1 | 1 | ½ |
| 658 | Switzerland | do | 3 | 45 | 45 | 45 | 40 | 40 | 3 | 3 | 3 | 3 | 3 |
| 659 | *France, | do. | 3 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 660 | Scotland | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 0 | ..... | ..... | 0 |
| 661 | Scotland, | do. | 5 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 1 | 2 | 2 |
| 662 | United States | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 2 | 3 |
| 663 | do. | do. | 4 | 45 | 45 | 45 | 87 | 70 | 0 | 1 | 1 | ..... | ..... |
| 664 | do. | do. | 4 | 45 | 45 | 45 | 15 | 45 | 1½ | 1½ | 1½ | 1½ | 1½ |
| 665 | do. | do. | 3 | 45 | 45 | 40 | 40 | ..... | 3 | ..... | ..... | ..... | ..... |
| 666 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 1 | 2 | 2 |
| 667 | do. | do. | 2 | 45 | 45 | 45 | 45 | 45 | 2 | ..... | ..... | ..... | ..... |
| 668 | do. | do. | 4 | 50 | 45 | 40 | 20 | 20 | 2 | 4 | 4 | 3 | 3 |
| 669 | do. | do. | 4 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 670 | do. | do. | 3 | 45 | 50 | 50 | 45 | 40 | 2 | 0 | 0 | 3 | 0 |
| 671 | do. | do. | 4 | 45 | 40 | 40 | 40 | 40 | 2 | 3 | 3 | 3 | 3 |

* Contractor.

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 672 | do. | do. | 4 | 40 | 45 | 45 | 45 | 45 | 5 | 5 | 5 | 3 | 3 |
| 673 | do. | do. | 3 | 45 | 45 | 45 | 40 | 40 | 6 | 4 | 4 | 4 | 4 |
| 674 | do. | do. | 4 | 45 | 45 | 45 | 47½ | 47½ | 2 | 4 | 4 | 4 | 4 |
| 675 | do. | do. | 3 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 676 | do. | do. | 3 | 45 | 45 | 50 | ..... | ..... | 1 | 0 | 4 | 3 | 0 |
| 677 | do. * | do. | 2 | 35 | ..... | ..... | ..... | ..... | 5½ | ..... | ..... | ..... | ..... |
| 678 | do. | do. | 4 | 45 | 45 | 45 | ..... | 45 | 3 | 3 | 2 | ..... | 3 |
| 679 | do. | do. | 3 | 45 | 45 | 45 | 45 | ..... | 2 | 3 | 3 | 3 | 3 |
| 680 | do. | do. | 4 | 39 | 45 | 45 | 45 | 45 | 2 | 4 | 4 | 4 | 4 |
| 681 | do. | do. | 6 | 45 | ..... | ..... | ..... | ..... | 0 | 0 | 0 | 0 | 0 |
| 682 | do. | do. | 4 | 45 | 45 | 45 | 40 | 40 | 0 | 4 | 4 | 6 | 0 |
| 683 | do. | do. | 3 | 45 | 45 | 50 | 50 | 50 | 2 | 3 | 3 | 3 | 3 |
| 684 | do. | do. | 4 | 55 | 55 | 45 | 40 | 40 | 3 | 4 | 4 | 4 | 4 |
| 685 | do. | do. | 4 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 686 | do. | do. | 4 | 45 | 45 | 40 | 40 | 45 | 1 | 0 | 0 | 0 | 4 |
| 687 | do. | do. | 3 | 50 | 50 | 45½ | 44½ | 45 | 3 | 2 | 0 | ..... | 3 |
| 688 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 4 | 4 | 5 | 4 |
| 689 | do. | do. | 3 | 45 | 45 | 45 | ..... | ..... | 4 | ..... | ..... | ..... | ..... |
| 690 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 4 | 8 | 6 | 3 | 3 |
| 691 | do. | do. | 3 | 45 | 45 | 45 | 45 | 47½ | 1½ | ..... | ..... | ..... | ..... |
| 692 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2½ | 4 | 4 | 4 | 4 |
| 693 | do. | do. | 4 | 45 | 45 | 40 | 40 | 30 | 5 | 4 | 3 | 4 | 4 |
| 694 | do. | do. | 3½ | 45 | ..... | ..... | ..... | ..... | 0 | ..... | ..... | ..... | ..... |
| 695 | do. | do. | 3 | 45 | 45 | ..... | ..... | ..... | 4 | 2 | ..... | ..... | ..... |
| 696 | do. | do. | 4 | 45 | 45 | ..... | ..... | ..... | 6 | 5 | 3 | 3 | 12 |
| 697 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 698 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 0 | 4½ | 0 | 0 | 0 |
| 699 | do. | do. | 4 | 45 | 45 | 45 | 45 | 40 | 0 | 0 | 0 | 0 | 0 |
| 700 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 4 | 1 | 1 | 1 | 1 |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 701 | United States. | Bricklayer. | 4 years. | 45 cts. | 45 cts. | 45 cts. | 45 cts. | 45 cts. | 3 months. | 4 months. | 4 months. | 4 months. | 4 months. |
| 702 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 3 | 4 | 2 |
| 703 | do. | do | 5 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 0 | 0 | 0 |
| 704 | do. | do. | 4 | 45 | 45 | 45 | 40 | 40 | 4 | 4 | 4 | 4 | 4 |
| 705 | do. | do. | 4 | 30 | 45 | 45 | 40 | 30 | 3 | 4 | 4 | 4 | 4 |
| 706 | do. | do. | 3 | ..... | 45 | 30 | 30 | 30 | ..... | 4 | 4 | 4 | 4 |
| 707 | do. | do. | 4 | 45 | 45 | 45 | ..... | ..... | 3 | 2 | 3 | ..... | ..... |
| 708 | do. | do. | 3 | 45 | 45 | ..... | ..... | ..... | ¼ | 0 | 0 | 0 | 0 |
| 709 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 4 | 4 | 5 | 3 | 3 |
| 710 | do. | do. | 4 | 45 | ..... | ..... | ..... | ..... | 3 | 3 | 4 | 3 | 4 |
| 711 | do. | do. | 3 | 45 | 45 | 45 | 45 | ..... | ½ | 4 | 3 | ..... | ..... |
| 712 | do. | do. | 4 | 45 | 45 | 45 | ..... | ..... | 3 | 8 | 0 | 0 | 0 |
| 713 | do. | do. | 4 | 45 | 45 | 45 | 40 | 40 | 2 | 4 | 4 | 4 | 4 |
| 714 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 2 | 3 | 3 | 3 | 3 |
| 715 | do. | do. | 4 1-6 | 27 | 27 | 18 | 45 | 45 | 0 | 2 | 0 | 3 | 3 |
| 716 | do. | do. | 7 | 45 | 45 | 45 | 40 | 40 | 6 | ..... | ..... | ..... | ..... |
| 717 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 3 | 3 |
| 718 | do. | do. | 4 | 17 | 13 | 11 | 9 | ..... | 2 | 2 | 3 | 2 | ..... |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 719 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 1 | 1 | 1 | 1 | 1 |
| 720 | do. | do. | 4 | 45 | ..... | ..... | ..... | ..... | 6 | ..... | ..... | ..... | ..... |
| 721 | do. | do. | 3 | 45 | 45 | 45 | 35 | 35 | 3½ | 3½ | 2 | 3 | ..... |
| 722 | do. | do. | 3 | 45 | 45 | 45 | 45 | 40 | 3 | ..... | ..... | ..... | ..... |
| 723 | do. | do. | 4 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... |
| 724 | do. | do. | 5 | 45 | 45 | 45 | 45 | 40 | 2 | 5 | 4 | 6 | 3½ |
| 725 | do. | do. | 4 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... |
| 726 | do. | do. | 3 | 45 | ..... | ..... | ..... | 40 | 2 | 6 | 6 | 6 | 6 |
| 727 | do. | do. | 3 | 45 | 45 | 45 | 45 | 40 | 3 | ..... | ..... | ..... | ..... |
| 728 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | 0 | 0 | 0 | 0 | 0 |
| 729 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 0 | 4 | 4 | 4 | 4 |
| *730 | do. | do. | 4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 731 | do. | do. | 4 | 45 | 45 | 45 | 65 | 65 | 3 | 10 | ..... | ..... | ..... |
| 732 | do. | do. | 5⅞ | 37 | 37 | 37 | 37 | 37 | 0 | 0 | 0 | 0 | 0 |
| 733 | do. | do. | 6 | 45 | 45 | 45 | 45 | 45 | 6 | 3 | 4 | 4 | 4 |
| 734 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | 6 | 6 | 6 | 6 |
| 735 | do. | do. | 4 | 45 | 45 | 45 | 40 | ..... | 4 | 4 | 3 | 4 | ..... |
| 736 | do. | do. | 4 | 45 | 45 | 22 | 17 | 11 | 0 | 3 | 3 | 2 | 3 |
| 737 | do. | do. | 5 | 45 | 45 | 45 | 45 | 40 | ..... | 3 | 3 | 3 | ..... |
| 738 | do. | do. | 3½ | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 739 | do. | do. | 4 | 45 | 45 | 50 | 50 | 50 | 0 | 0 | 0 | 0 | 0 |
| 740 | do. | do. | 1 | 45 & 47 | 45 | 45 & 56 | 45 | 45 & 56 | 2 | 2 | 2 | 2 | 1 |
| 741 | do. | do. | 5 | 45 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... |
| 742 | do. | do. | 4 | 45 | 45 | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... |
| 743 | do. | do. | 4 | 47 | 50 | 47 | 47 | 47 | 2 | 2 | 2 | 0 | 1 |
| 744 | do. | do. | 7 | 45 | 45 | 40 | 37 | ..... | 4½ | 6 | 6 | ..... | ..... |
| 745 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 4 | ..... | ..... | ..... | ..... |
| 746 | do. | do. | 3 | 45 | 45 | 45 | 45 | 45 | 2 | 4 | 4 | 4 | 4 |

* Contractor.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 747 | United States, | Bricklayer, | 3½ years | 45 cts. | 45 cts. | 45 cts. | 45 cts. | 45 cts. | ..... | ..... | ..... | ..... | ..... |
| 748 | do. | do. | 2¼ | 45 | ..... | ..... | ..... | ..... | 0 months, | 4 months, | ..... | ..... | ..... |
| 749 | do. | do. | 3½ | 45 | ..... | ..... | ..... | ..... | 4 | ..... | ..... | ..... | ..... |
| 750 | do. | do, | 3 | 45 | 45 | 45 | 45 | 45 | 0 | 2 | 2 months, | 3 months, | 0 mon s, |
| 751 | do. | do. | 3 | 48 | 48 | 50 | 50 | 50 | 0 | 0 | 0 | 0 | 0 |
| 752 | do. | do. | 4¼ | 50 | 50 | 50 | 50 | 50 | 0 | 0 | 0 | ½ | ½ |
| 753 | do. | do. | 5½ | 45 | 45 | 45 | 40 | 40 | 2 | 4 | 2 | ..... | ..... |
| 754 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 4 | 4 | 1 | 4 | 4 |
| 755 | do. | do. | 3 | 45 | 45 | 47½ | 47½ | 47½ | 4 | ..... | ..... | ..... | ..... |
| 756 | do. | do. | 4 | 45 35 | 45 | 45 | ..... | ..... | 5 | 2 | 3 | ..... | ..... |
| 757 | do. | do. | 4 | 45 | 45 | 45 | 45 | 45 | 3 | ..... | ..... | ..... | ..... |
| 758 | do. | do. | 6 | 45 | 45 | 45 | 45 | 45 | 6 | 5 | 5 | 5 | 5 |
| 759 | do. | do. | 3 | 45 | 45 | 45 | 45 | 40 | 2 | 0 | 2½ | 3 | 0 |
| 760 | do. | do. | 3 | 45 | 45 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... |
| 761 | do. | do. | 4½ | 45 | 45 | 45 | 45 | 45 | 3 | 2 | 1 | 4 | 1½ |
| 762 | do. | do. | 3 | 45 | 45 | ..... | ..... | ..... | 1 | 1 | 0 | 0 | 0 |
| 763 | do. | do. | 4 | 45 | 45 | 45 | 45 | 40 | 2 | 3 | 2 | 3 | 3 |
| 764 | do. | do. | 3 | 45 | ..... | ..... | ..... | ..... | 3 | ..... | ..... | ..... | ..... |
| 765 | do. | do. | 3½ | 50 | 50 | 50 | 50 | 50 | 2 | 2 | 2 | 2 | 0 |
| 766 | England. | do. | No, | 45 | 45 | 45 | 45 | 40 | 0 | 0 | 1 | 3 | 3 |

## WORKMEN IN BUILDING TRADES—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States | Bricklayer | Weekly | Nothing | $200 00 | $220 00 | $200 00 | $564 00 | United States | No. |
| 2 | England | do. | do. | | | | | | do. | No. |
| 3 | United States | do. | do. | $101 10 | 630 60 | 650 60 | 1,156 20 | 1,156 20 | do. | No. |
| 4 | England | do. | do. | | | | | | England | No. |
| 5 | United States | do. | do. | | | | | | United States | No |
| 6 | Germany | do. | do. | 270 00 | 635 00 | | | | Germany | No |
| 7 | United States | do. | Semi-monthly | | | | | | United States | No. |
| 8 | Germany | do. | Weekly | 156 00 | | | | | do. | No. |
| 9 | United States | do. | do. | 150 00 | | | | | do. | No |
| 10 | Ireland | do. | do. | Nothing | | | | | Ireland | No. |
| 11 | United States | do. | do. | | | | | | United States | No |
| 12 | Germany | do. | do. | | | | | | do. | No. |
| 13 | do. | do. | do. | | | | | | do. | No. |
| 14 | United States | do. | do. | 200 00 | 300 00 | 500 00 | 600 00 | 600 00 | do. | No. |
| 15 | England | do. | do. | | | | | | | No |
| 16 | do. | do. | do. | | | | | | England | No. |
| 17 | United States | do. | do. | 40 00 | 200 00 | | | | United States | No. |
| 18 | do. | do. | do. | 125 00 | 500 00 | 400 00 | 100 00 | 400 00 | do. | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 19 | United States, | Bricklayer, | Weekly, | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 20 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 21 | do. | do. | do. | $270 00 | $600 00 | $390 00 | $312 00 | $260 00 | do. | No. |
| 22 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | N |
| 23 | Ireland, | do. | do. | 160 00 | 225 00 | 300 00 | 168 00 | 275 00 | do. | Yes. |
| 24 | United States, | do. | do. | 375 00 | 733 00 | 823 00 | 732 00 | 819 00 | do. | No. |
| 25 | Ireland, | do. | do. | 200 40 | 700 47 | 800 00 | 700 60 | 900 00 | England, | No. |
| 26 | United States, | do. | do. | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 27 | Germany, | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 28 | England, | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No |
| 29 | Ireland, | do. | do. | 300 00 | 900 00 | 700 00 | 450 00 | 1,000 00 | do. | No. |
| 30 | United States, | do. | do. | 400 00 | 600 00 | 400 00 | 300 00 | 700 00 | do. | No. |
| 31 | do. | do. | do. | 175 00 | ..... | ..... | ..... | ..... | do. | No. |
| 32 | do. | do. | do. | ..... | ..... | ..... | ..... | 168 84 | do. | No. |
| 33 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 34 | do. | do. | do. | 360 00 | 400 00 | 360 00 | ..... | ..... | do. | No. |
| 35 | do. | do. | do. | 156 00 | ..... | ..... | ..... | ..... | do. | No. |
| 36 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 37 | do. | do. | do. | | | | | | do. | No. | |
| 38 | England, | do. | do. | about 1,000 00 | 700 00 | 600 00 | 600 00 | 500 00 | do. | No. | |
| 39 | United States, | do. | do. | 131 00 | 776 88 | 985 82 | 1,088 88 | 998 40 | do. | No. | |
| 40 | England. | do. | do. | | | | | | England, | No. | |
| 41 | United States, | do. | do. | 370 00 | 865 00 | 700 00 | 730 00 | 609 00 | United States. | No. | |
| 42 | do. | do. | do. | 40 00 | 260 00 | 500 00 | 500 00 | 480 00 | do. | No. | |
| 43 | Ireland, | do. | do. | 290 00 | 800 00 | | | | do. | No | |
| 44 | United States, | do. | do. | | | | | | do. | | |
| 45 | do. | do. | do. | 200 00 | | | | | do. | No. | |
| 46 | do. | do. | do. | 400 00 | | | | | do. | No. | |
| 47 | do. | do. | do. | | | | | | do. | No. | |
| 48 | do. | do. | do. | 300 00 | 300 00 | 500 00 | 500 00 | 500 00 | do. | No. | |
| 49 | do. | do. | do. | 200 00 | | | | | do. | No. | |
| 50 | do. | do. | | | | | | | do. | | |
| 51 | do. | do. | do. | | | | | | do. | No. | |
| 52 | do. | do. | do. | | | | | | do. | No. | |
| 53 | Ireland, | do. | do. | | | | | | England. | | |
| 54 | United States, | do. | do. | 350 00 | 600 00 | 600 00 | 600 00 | 350 00 | United States, | No. | |
| 55 | do. | do. | do. | | | | | | do. | | |
| 56 | do. | do. | do. | | | | | | do. | No. | |
| 57 | do. | do. | do. | 150 00 | | | | | do. | No. | |
| 58 | do. | do. | do. | | | | | | do. | No. | |
| 59 | do. | do. | do. | | | | | | do. | No. | |
| 60 | do. | do. | do. | | | | | | do. | No. | |
| 61 | do. | do. | Bi-weekly, | 540 00 | 540 00 | 540 00 | 540 00 | 540 00 | do. | No. | |
| 62 | do. | do. | Weekly, | | | | | | do. | No. | |
| 63 | do. | do. | do. | | | | | | do. | No. | |
| 64 | do. | do. | do. | 400 00 | 785 00 | 700 00 | 600 00 | 400 00 | do. | No. | |
| 65 | do | o. | do. | | | | | | do. | No. | |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 66 | United States, | Bricklayer. | We kly, | $200 00 | $400 00 | $400 00 | $400 00 | $400 00 | United States, | N |
| 67 | England, | do. | do. | | | | | | do. | No. |
| 68 | United States, | o. | do. | 180 00 | 552 24 | 672 41 | 618 71 | 699 13 | do. | No. |
| 69 | England, | d | do. | | | | | | England, | No. |
| 70 | United States, | do. | do. | 200 00 | 200 00 | 900 00 | 350 00 | 400 00 | United States, | No. |
| 71 | do. | do. | do. | | | | | | do. | No. |
| 72 | Denmark, | do. | do. | | | | | | Denmark, | No. |
| 73 | Germany, | o. | do. | 225 00 | | | | | Germany, | No. |
| 74 | United States, | | do. | 200 00 | | | | | United States, | No. |
| 75 | do. | do. | do. | | | | | | do. | No. |
| 76 | do | do. | do. | 164 85 | 809 00 | | | | do. | No. |
| 77 | do. | do. | do. | 292 50 | 877 50 | 563 00 | 364 00 | 312 00 | do. | No. |
| 78 | do. | do. | do. | 150 00 | 500 00 | 600 00 | 700 00 | 750 00 | do. | No. |
| 79 | England, | do. | do. | | | 389 00 | 350 00 | 331 00 | do. | |
| 80 | United States. | do. | do. | | | | | | do. | |
| 81 | do. | do. | do. | | | | | | do. | |
| 82 | do. | do. | do. | | 234 26 | 164 78 | 198 51 | 150 00 | do. | |
| 83 | do. | do. | do, | 400 00 | | | | | do. | No. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 84 | do. | do. | do. | | | | | | do. | | |
| 85 | do. | do. | do. | | | | | | do. | | |
| 86 | do. | do. | do. | | | | | | do. | | No |
| 87 | do. | do. | do. | | | | | | do. | | |
| 88 | do. | do. | do. | 81 00 | | | | | do. | | No. |
| 89 | England. | do. | do. | 720 00 | 650 00 | 600 00 | 450 00 | 500 00 | England. | | No. |
| 90 | United States, | do. | do. | 400 00 | 750 00 | 750 00 | 1.091 00 | 690 00 | United States, | | Partly. |
| 91 | do. | do. | do. | | | | | | do. | | No. |
| 92 | do. | do. | do. | | | | | | do. | | No. |
| 93 | do. | do. | do. | | | | | | do. | | |
| 94 | do. | do. | do. | 0 | | | | | do. | | No. |
| 95 | do. | do. | do. | 100 00 | 290 00 | 350 00 | 350 00 | 350 00 | do. | | No. |
| 96 | do. | do. | do. | 435 61 | 880 28 | 782 12 | 819 55 | 904 66 | do. | | No |
| 97 | do. | do. | do. | | | | | | do. | | No |
| 98 | do. | do. | do. | | | | | | do. | | No |
| 99 | do. | do. | do. | 380 70 | 413 10 | 200 48 | 259 20 | 263 25 | do. | | No |
| 100 | do. | do. | Bi-weekly. | 252 00 | 504 00 | | | | do | | No. |
| 101 | do. | do. | Weekly, | 50 00 | 300 00 | 500 00 | 400 00 | 700 00 | do. | | No. |
| 102 | do. | do. | do. | | | | | | do. | | No. |
| 103 | do. | do. | do. | 600 00 | | | | | do. | | No. |
| 104 | do. | do. | do. | 421 20 | 648 00 | | | | do. | | No. |
| 105 | do. | do. | do. | 300 00 | 500 00 | | | | do | | No. |
| 106 | do. | do. | do. | 437 50 | 875 00 | 875 00 | 875 00 | 875 00 | do. | | No. |
| 107 | do. | do. | do. | | | | | | do. | | No. |
| 108 | do. | do. | do. | 136 95 | 408 51 | 246 31 | 194 61 | 329 60 | do. | | No |
| 109 | do. | do. | do. | | | | | | do. | | No |
| 110 | do. | do. | do. | 300 00 | 658 30 | 553 58 | 525 00 | 475 00 | do. | | No |
| 111 | do. | do. | do. | 190 00 | | | | | do. | | No |
| 112 | do. | do. | do. | 200 00 | 350 00 | 400 00 | 450 00 | 500 00 | do. | | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 113 | United States, | Bricklayer, | Weekly, | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 114 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 115 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 116 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 117 | do. | do. | Bi-weekly. | $514 60 | $360 00 | $360 00 | $324 00 | $318 50 | do. | No. |
| 118 | do. | do. | Weekly, | 225 00 | 610 00 | 825 00 | 950 00 | 1,015 00 | do. | No. |
| 119 | do. | do. | do. | 400 00 | ..... | ..... | ..... | ..... | do. | No. |
| 120 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 121 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 122 | Germany, | do. | do. | 20 00 | ..... | ..... | ..... | ..... | do. | No. |
| 123 | Ireland, | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | |
| 124 | do. | do. | do. | 330 00 | 300 00 | 300 00 | 300 00 | 300 00 | do. | No. |
| 125 | Russia. | do. | do. | 150 00 | 812 00 | 750 00 | 520 00 | ..... | do. | No. |
| 126 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | Russia, | No. |
| 127 | United States, | do. | do. | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 128 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 129 | England, | do. | Bi-weekly, | 160 33 | 503 07 | 589 35 | 643 91 | 784 01 | England, | No. |
| 130 | United States, | do. | do. | ..... | ..... | ..... | ..... | ..... | United States, | No. |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 131 | do. | do. | Weekly, | 200 00 | 600 00 | 650 00 | 500 00 | 750 00 | do. | No. |
| *132 | do. | do. | Monthly, | | | | | | do. | |
| 133 | do. | do. | Weekly, | | | | | | do. | No. |
| 134 | do. | do. | do. | | | | | | do. | No. |
| 135 | do. | do. | do. | | | | | | do. | No. |
| 136 | do. | do. | Bi-weekly, | | 250 00 | 400 00 | 400 00 | 450 00 | do. | No. |
| 137 | England, | do. | Weekly, | 50 00 | 75 00 | 150 00 | | | do. | No. |
| 138 | United States, | do. | do. | 150 00 | 200 00 | | | | do. | No. |
| 139 | England, | do. | do. | 180 00 | 952 73 | 789 00 | 769 00 | 692 16 | England, | Sometimes. |
| 140 | United States, | do | do. | 375 00 | | | | | United States, | No. |
| 141 | England, | do. | do. | | | | | | England, | No. |
| 142 | United States, | do. | do. | 250 00 | | | | | United States, | No. |
| 143 | do. | do. | do. | | | | | | do. | No. |
| 144 | England, | do. | do. | | | | | | England, | No. |
| 145 | United States, | do. | do. | 345 00 | 690 00 | 690 00 | 690 00 | 690 00 | United States, | No. |
| 146 | do. | do. | do. | 250 00 | 600 00 | 900 00 | 1,100 00 | 1,000 00 | do. | No |
| 147 | do. | do. | do. | 300 00 | 450 00 | 450 00 | 450 00 | | do | No. |
| 148 | do. | do. | do. | | | | | | do. | No. |
| 149 | do. | do. | do. | | | | | | do. | No. |
| 150 | do. | do. | do. | 300 00 | 750 00 | 700 00 | 800 00 | 750 00 | do. | No. |
| 151 | do. | do. | do. | | | | | | do. | No. |
| 152 | do. | do. | do. | 400 00 | 811 00 | 640 00 | 600 00 | 600 00 | do. | No. |
| 153 | do. | do. | do. | 520 00 | 520 00 | 520 00 | | | do. | No. |
| 154 | England, | do. | do. | 360 00 | 660 00 | 660 00 | 660 00 | 660 00 | England, | No. |
| 155 | United States, | do. | do. | 40 00 | | | | | United States, | No. |
| 156 | do. | do. | do. | | | | | | do. | No. |
| †157 | do. | do. | do. | 720 00 | 1,440 00 | 1,440 00 | 1,440 00 | 1,440 00 | do. | No. |
| 158 | do. | do. | do. | 50 00 | 600 00 | 600 00 | 700 00 | 700 00 | do. | No |

*Am now inspector of sewers in Philadelphia. †Superintendent.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 159 | United States, | Bricklayer, | Weekly, | | | | | | United States, | No. |
| 160 | do. | do. | do. | | | | | | do. | No. |
| 161 | do. | do. | do. | $390 00 | $700 00 | $650 00 | $900 00 | $816 00 | do. | Yes. |
| 162 | Ireland, | do. | do. | 198 00 | 396 00 | 396 00 | 396 00 | 396 09 | do. | Sometimes. |
| 163 | United States, | do. | do. | | | | | | do. | |
| 164 | do. | do. | do, | | | | | | do. | No. |
| 165 | England, | do. | do. | 175 00 | | | | | England & United States | Sometimes. |
| 166 | United States, | do. | do. | 300 00 | 700 00 | 700 00 | 700 00 | 700 00 | United States, | No. |
| 167 | England, | do. | do. | 300 00 | 700 00 | 600 00 | 700 00 | 800 00 | England, | No. |
| 168 | Denmark, | do. | do. | 300 28 | | | | | Denmark, | No. |
| 169 | United States, | do. | do. | | | | | | United States. | No. |
| 170 | do. | do. | do. | 247 12 | 617 92 | 719 19 | 672 00 | 633 70 | do. | No. |
| 171 | Ireland, | do. | do. | | | | | | do. | No. |
| 172 | England, | do. | do. | 200 00 | 350 00 | 400 00 | 350 00 | 490 00 | England. | No. |
| 173 | United States, | do. | do. | | | | | | United States, | No. |
| 174 | England, | do. | do. | | | | | | England. | |
| 175 | United States. | do. | do. | | | | | | United States, | No. |
| 176 | England, | do. | do. | | | | | | England, | No. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 177 | Scotland, | do. | do. | | | | | | Scotland. | No. |
| 178 | Ireland, | do. | do. | 150 00 | 350 00 | 175 00 | 300 00 | 300 00 | United States, | No. |
| 179 | Scotland, | do. | do. | 320 00 | 320 00 | 320 00 | 320 00 | 320 00 | Scotland, | No. |
| 180 | United States. | do. | no. | | | | | | United States. | No. |
| 181 | do. | do. | do. | 396 00 | | | | | do. | No |
| 182 | Germany, | do. | do. | | | | | | do. | No. |
| 183 | United States, | do. | do. | | 250 00 | | | | do. | No. |
| 184 | do. | do. | do. | | | | | | do. | No. |
| *185 | do. | do. | do. | | | | | | do. | No. |
| 186 | England, | do. | do. | | | | | | England. | |
| 187 | United States, | do. | do. | | | | | | United States. | No. |
| 188 | do. | do. | do. | | | | | | do. | |
| 189 | do. | do. | do. | | | | | | do. | No. |
| 190 | do. | do. | do. | | | | | | do | No. |
| 191 | do. | do. | do. | 210 00 | | | | | do. | No. |
| 192 | Ireland, | do. | do. | 180 00 | 576 00 | 528 00 | 621 00 | 360 00 | England, | No. |
| 193 | United States, | do. | do. | | | | | | United States. | No. |
| 194 | do. | do. | do. | 240 78 | 223 70 | 515 02 | 362 46 | 255 93 | do. | No. |
| †195 | do. | do. | Monthly. | 500 00 | 900 00 | 900 00 | 900 00 | 900 00 | do. | No. |
| 196 | Ireland. | do. | Weekly, | | | | | | do. | No. |
| 197 | United States, | do. | do. | 200 60 | | | | | do. | No. |
| 198 | do. | do. | do. | 300 00 | 500 00 | 500 00 | 600 00 | | do | No. |
| 199 | England, | do. | do. | | | | | | do. | No. |
| 200 | United States, | do. | do. | 150 00 | 172 00 | 172 00 | 172 00 | 172 00 | do. | No. |
| 201 | England, | do. | do. | | | | | | England. | No. |
| 202 | Scotland, | do. | do. | | 150 00 | | | | Scotland. | No. |
| 203 | Germany, | do. | do. | | | | | | Germany, | No. |
| 204 | United States, | do. | do. | 400 00 | 375 00 | 400 00 | 450 00 | 350 00 | United States. | No. |

*Employer in 1894. †Sewer Inspector $100 per month.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 205 | United States, | Bricklayer, | Weekly, | $300 00 | $600 00 | $625 00 | $650 00 | $670 00 | nit e States, | No. |
| 206 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 207 | do. | do. | do. | 150 00 | 400 00 | 500 00 | 600 00 | 700 00 | do. | No. |
| 208 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | Yes. |
| 209 | Ireland, | do. | do. | ..... | ..... | ..... | ..... | ..... | Ireland, | No. |
| 210 | Germany, | do. | do. | 575 00 | 300 00 | ..... | ..... | ..... | Germany, | No. |
| 211 | United States, | do. | ..... | ..... | ..... | ..... | ..... | ..... | United States. | |
| 212 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do. | |
| 213 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 214 | do. | do. | do. | 405 00 | ..... | ..... | 207 00 | ..... | do. | No. |
| 215 | England. | do. | do. | ..... | 360 00 | 420 00 | 480 00 | 600 00 | England, | No. |
| 216 | United States. | do. | do. | 250 00 | 998 00 | ..... | ..... | ..... | United States, | No. |
| 217 | do. | do. | do. | 450 00 | 810 00 | 810 00 | 810 00 | 810 00 | do. | No. |
| 218 | do. | do. | do. | ..... | 300 00 | 175 00 | 175 00 | 175 00 | do. | No. |
| 219 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 220 | Ireland, | do. | do. | 400 00 | 400 00 | 400 00 | 400 00 | 400 00 | Ireland, | No. |
| 221 | United States, | do. | do. | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 222 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | Yes. |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 223 | Sweden, | do. | do. | | | | | | do. | No. |
| 224 | United States, | do. | do. | | | | | | do. | Yes. |
| 225 | England, | do. | do. | | 250 00 | 500 00 | 650 00 | 650 00 | England, | No. |
| 226 | United States. | do. | do. | | | | | | United States, | No. |
| 227 | do. | do. | do. | 375 00 | 750 00 | 750 00 | 325 00 | 325 00 | do. | No. |
| 228 | do. | do. | do. | | | | | | do. | No. |
| 229 | do. | do. | do. | 120 00 | | | | | do. | Sometimes. |
| 230 | do. | do. | do. | | | | | | do. | No. |
| 231 | do. | do. | do. | | | | | | do. | |
| 232 | East India, | do. | do. | | | | | | do. | No. |
| 233 | United States, | do. | do. | | | | | | do. | No. |
| 234 | do. | do. | do. | 400 00 | 800 00 | 800 00 | 800 00 | 800 00 | do. | No. |
| 235 | Ireland, | do. | do. | | 300 00 | | | | do. | No. |
| 236 | United States, | do. | do. | 570 10 | 458 42 | | | | do. | No. |
| 237 | do. | do. | Bi-weekly, | | | | | | do. | No. |
| 238 | do. | do. | Weekly, | 360 00 | | | | | do. | No. |
| 239 | do. | do. | do. | | | | | | do. | No. |
| 240 | Scotland, | do. | do. | | | | | | do. | No. |
| 241 | United States, | do. | do. | | | | | | do. | No. |
| 242 | do. | do. | do. | | 487 00 | 680 00 | 264 00 | 708 00 | do. | Yes. |
| 243 | Ireland, | do. | do. | 375 00 | 375 00 | 300 00 | | 375 00 | do. | No. |
| 244 | United States. | do. | do. | | | 211 65 | 204 28 | 437 34 | do. | No. |
| 245 | do. | do. | do. | 425 00 | 850 00 | 850 00 | 850 00 | 850 00 | do. | No. |
| 246 | do. | do. | do. | | | | | | do. | No. |
| 247 | do. | do. | do. | | | | | | do. | No. |
| 248 | do. | do. | do. | 300 00 | | | | | do. | No. |
| 249 | do. | do. | do. | 270 00 | 720 00 | 720 00 | 720 00 | 720 00 | do. | No. |
| 250 | England. | do. | do. | 456 16 | 875 00 | 815 00 | 801 00 | 770 00 | England. | No. |
| 251 | United States. | do. | do. | | | | | | United States. | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 252 | United States, | Bricklayer, | Weekly, | | $500 00 | $500 00 | $500 00 | $500 00 | United States, | No. |
| 253 | England. | do. | do. | $580 00 | 1,163 00 | 900 00 | 1,100 00 | 1,275 00 | do. | No. |
| 254 | United States, | do. | do. | 300 00 | 700 00 | 700 00 | 700 00 | 900 00 | do. | Sometimes. |
| 255 | do. | do. | do. | 415 00 | 830 00 | 830 00 | 830 00 | 623 00 | do. | No. |
| 256 | do. | do. | do. | 500 00 | 500 00 | 400 00 | 400 00 | 360 00 | do. | No. |
| 257 | do. | do. | do. | | | | | | do. | No. |
| 258 | do. | do. | do. | | | | | | do. | No. |
| 259 | England, | do. | do. | 270 00 | 200 00 | 500 00 | 350 00 | 240 00 | England, | No. |
| 260 | Germany, | do. | do. | | | | | | United States, | No. |
| 261 | United States, | do. | do. | | | | | | do. | No. |
| 262 | do. | do. | do. | | | | | | do. | No. |
| 263 | do. | do. | do. | | | | | | do. | No. |
| 264 | do. | do. | do. | | | | | | do. | No. |
| 265 | do. | do. | do. | | | | | | do. | |
| 266 | do. | do. | do. | 130 00 | | | | | do. | No. |
| 267 | Hungary, | do. | do. | 150 00 | 560 00 | 650 00 | 680 00 | 700 00 | | No. |
| 268 | United States, | do. | do. | 310 00 | | | | | do. | No. |
| 269 | do. | do. | do. | 160 00 | 840 00 | 992 00 | 1,015 00 | 860 00 | do. | Yes. |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 270 | do. | do. | do. | 200 00 | ..... | ..... | ..... | ..... | do. | No. |
| 271 | do. | do. | do. | 372 00 | ..... | ..... | ..... | ..... | do. | No. |
| 272 | do. | do. | do. | 119 15 | 233 41 | 221 59 | 239 84 | 280 41 | do | No. |
| 273 | England. | do. | do. | 176 00 | 450 00 | 450 00 | 450 00 | ..... | England. | No. |
| 274 | United States. | do. | do. | 200 00 | 600 00 | 500 00 | 500 00 | 400 00 | United States. | No. |
| 275 | do. | do. | Monthly. | 840 00 | 1635 00 | 1500 00 | 1400 60 | 1472 00 | do. | No. |
| 276 | do. | do. | Weekly. | 125 00 | 400 00 | 375 00 | 489 00 | 595 00 | do. | No. |
| 277 | do. | do. | do. | 200 00 | 200 00 | 200 00 | 133 00 | 200 00 | do. | No. |
| 278 | do. | do. | do. | 250 00 | 320 00 | 350 00 | 350 00 | 220 00 | do. | No. |
| 279 | do. | do. | Semi-monthly, | 120 00 | 380 00 | 380 00 | 380 00 | ..... | do. | No. |
| 280 | England. | do. | Weekly. | 288 00 | 480 00 | 440 00 | 800 00 | 1070 00 | England. | No. |
| 281 | United States, | do. | do. | 210 60 | ..... | ..... | ..... | ..... | United States. | Sometimes. |
| 282 | do. | do. | do. | 274 14 | 542 49 | 263 30 | 290 81 | 389 58 | do. | No. |
| 283 | do. | do. | do. | 546 00 | 1092 00 | 1092 00 | 1092 00 | 1092 00 | do. | No. |
| 284 | do. | do. | do. | 100 00 | ..... | ..... | ..... | ..... | do. | No. |
| 285 | Ireland. | do. | do. | 728 00 | 755 00 | 825 00 | 875 00 | 910 00 | Ireland & United States. | No |
| 286 | England. | do. | do. | ..... | 500 00 | 650 00 | 700 00 | 770 00 | England. | No. |
| 287 | United States, | do. | do. | ..... | 133 00 | ..... | ..... | ..... | United States. | No. |
| 288 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 289 | do. | do. | do. | 250 00 | 500 00 | 500 00 | 500 00 | 500 00 | do. | No |
| 299 | do. | do. | do. | 180 00 | 800 00 | 850 00 | 785 00 | 700 09 | do. | No. |
| 291 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No |
| 292 | do. | do. | do. | 200 00 | ..... | ..... | ..... | ..... | do. | |
| 293 | England, | do. | do. | 330 00 | 190 00 | 200 00 | 236 00 | 236 00 | England. | No. |
| 294 | United States, | do. | do. | 450 00 | 800 00 | 800 60 | 700 00 | 700 00 | United States, | No |
| 295 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 296 | do. | do. | do. | 150 60 | ..... | ..... | ..... | ..... | do. | No |
| 297 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 298 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do. | Yes. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years. | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 299 | United States, | Bricklayer, | Weekly, | $175 00 | $350 00 | $350 00 | $350 00 | $350 00 | United States, | No. |
| 300 | do. | do. | do. | | | | | | | |
| 301 | United States, | do. | do. | 250 00 | 200 00 | 200 00 | 200 00 | 200 00 | United States, | No. |
| 302 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 303 | England, | do. | Semi-monthly, | ..... | ..... | ..... | ..... | ..... | England, | No. |
| 304 | United States, | do. | Weekly, | 572 00 | ..... | 992 00 | ..... | ..... | United States, | Yes. |
| 305 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| *306 | Germany. | do. | ..... | ..... | ..... | ..... | ..... | ..... | Germany. | |
| 307 | United States, | do. | Weekly, | 200 00 | 965 00 | 520 00 | 416 00 | 312 00 | United States, | No. |
| 308 | Ireland, | do. | do. | 8 00 | 17 00 | 50 00 | 75 00 | 150 00 | do. | No. |
| 309 | do. | do. | do. | 600 00 | 1,100 00 | 1,000 00 | 1,000 00 | 1,000 00 | do. | No. |
| 310 | United States, | do. | do. | 350 00 | 700 00 | 700 00 | 700 00 | 700 00 | do. | No. |
| 311 | do. | do. | do. | ..... | 737 10 | 737 10 | 842 40 | 658 20 | do. | No. |
| 312 | do. | do. | do. | 301 03 | 355 89 | 259 80 | 130 27 | 225 00 | do. | No. |
| 313 | do. | do. | do. | 160 00 | 175 00 | 200 00 | ..... | 180 00 | do. | No. |
| 314 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 315 | do. | do. | do, | 390 00 | 780 00 | 780 00 | 600 00 | 600 00 | do. | No. |
| 316 | do. | do. | do. | 225 00 | 700 00 | 700 00 | 700 00 | 700 00 | do. | No. |

* Contractor.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 317 | do. | do. | do. | | | | | | do. | No. |
| 318 | do. | do. | do. | | | | | | do. | No. |
| 319 | do. | do. | Semi-monthly, | 400 00 | 800 00 | 700 00 | 700 00 | | do. | |
| 320 | Ireland, | do. | Weekly | 300 00 | 900 00 | | | | do. | No. |
| 321 | United States, | do. | | | | | | | do. | |
| 322 | England, | do. | Weekly, | | | | | | | No. |
| 323 | United States, | do. | do. | | | | | | United States, | No. |
| 324 | do. | do. | do. | 300 00 | 580 00 | 670 00 | 620 00 | | do. | No. |
| 325 | do. | do. | do. | | | | | | do. | No. |
| 326 | do. | do. | do. | 300 00 | 700 00 | 675 00 | 682 00 | 710 00 | do. | No. |
| 327 | do. | do. | do. | | | | | | do. | No. |
| 328 | do. | do. | do. | | | | | | do. | No. |
| 329 | do. | do. | do. | 302 40 | 770 00 | | | | | No. |
| 330 | England, | do. | Semi-monthly, | 200 00 | 700 00 | 700 00 | 700 00 | | | No. |
| 331 | United States, | do. | Weekly, | | | | | | United States. | |
| 332 | do. | do. | do. | 51 30 | | | | | do | |
| 333 | do. | do. | do. | 200 00 | 872 00 | 758 00 | | | do. | No. |
| 334 | do. | do. | do. | | | | | | do. | No. |
| 335 | do. | do. | do. | 300 00 | 500 00 | | | | do. | No. |
| 336 | do. | do. | do. | 100 00 | | | | | do. | No, |
| 337 | England, | do. | do. | 150 00 | | | | | do. | No |
| 338 | United States, | do. | do. | | | | | | do. | |
| 339 | do. | do. | do. | | | | | | do. | No. |
| 340 | do. | do. | Semi-monthly, | 460 00 | 460 00 | 460 00 | | | do. | No. |
| 341 | do. | do. | Weekly. | 225 00 | | | | | do. | Sometimes. |
| 342 | do. | do. | do. | 175 00 | 175 00 | 300 00 | 300 00 | 300 00 | do. | No. |
| 343 | do. | do. | do. | | | | | | do. | |
| 344 | Germany, | do. | do. | 300 00 | 300 00 | 275 00 | 350 00 | 325 00 | do. | No. |
| 345 | England, | do. | do. | 250 00 | 240 00 | 240 00 | 240 00 | 240 00 | England, | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the U. S., if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 346 | United States, | Bricklayer, | Weekly, | $400 00 | ..... | ..... | ..... | ..... | United States. | |
| 347 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 348 | England, | do. | do. | 22 50 | $650 00 | $525 00 | $470 00 | ..... | do. | No. |
| 349 | United States, | do. | do, | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 350 | do. | do. | do. | 100 00 | ..... | ..... | ..... | ..... | do. | No. |
| 351 | do. | do. | do. | 300 00 | ..... | ..... | ..... | ..... | do. | No. |
| 352 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 353 | England, | do. | do. | ..... | ..... | ..... | ..... | ..... | England, | No. |
| 354 | do. | do. | do. | 160 00 | 200 00 | 190 00 | 190 00 | $160 00 | do. | No. |
| 355 | United States, | do. | do. | 500 00 | ..... | ..... | ..... | ..... | United States, | No. |
| 356 | England, | do. | do. | 460 00 | 1,020 00 | 1,000 00 | 960 00 | 805 00 | England, | No. |
| 357 | United States, | do. | do. | 250 00 | ..... | ..... | ..... | ..... | United States, | No |
| 358 | England, | do. | do. | 240 00 | 600 00 | 600 00 | 600 00 | 600 00 | England, | No. |
| 359 | United States, | do. | do. | 267 73 | ..... | ..... | ..... | ..... | United States, | No. |
| 360 | do | do. | do. | 350 00 | 700 00 | 700 00 | 700 00 | 700 00 | do. | No. |
| 361 | do. | do. | do. | ..... | 97 20 | 97 20 | 97 20 | 97 20 | do. | No. |
| 362 | do. | do. | do. | 200 80 | 700 00 | 700 50 | 766 00 | 775 00 | do. | No. |
| 363 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 364 | do. | do. | Weekly. | | | | | | do. | No. | |
| 365 | do. | do. | do. | 102 15 | 380 93 | 574 51 | 414 23 | 632 70 | do. | No. | |
| 366 | do. | do. | do. | | | 315 90 | 280 80 | 367 20 | do. | No. | |
| 367 | do. | do. | do. | 100 00 | | | | | do. | No. | |
| 368 | do. | do. | do. | | | | | | do. | No. | |
| 369 | do. | do. | do. | 300 00 | 775 00 | 775 00 | 775 00 | 775 00 | do. | No. | |
| 370 | do. | do. | do. | | | | | | do. | No. | |
| 371 | do. | do. | do. | 720 00 | | | | | do. | No. | |
| 372 | do. | do. | do. | 352 00 | | | | | do. | | |
| 373 | do. | do. | do. | | | | | | do. | No. | |
| 374 | do. | do. | do. | 320 00 | | | | | do. | No. | |
| 375 | do. | do. | do. | | | | | | do. | No. | |
| 376 | do. | do. | do. | | | | | | do. | No. | |
| 377 | do. | do. | do. | | | | | | do. | No. | |
| 378 | do. | do. | do. | | | | | | do. | No. | |
| 379 | do. | do. | do. | | | | | | do. | No. | |
| 380 | do. | do. | do. | 50 00 | 200 00 | 100 00 | 90 00 | 90 00 | do. | No. | |
| 381 | do. | do. | do. | | | | | | do. | No. | |
| 382 | do. | do. | do. | | | | | | do. | No. | |
| 383 | do. | do. | do. | | | | | | do. | No. | |
| 384 | do. | do. | do. | 360 00 | 150 00 | 120 00 | 150 00 | 125 00 | do. | No | |
| 385 | do. | do. | do. | | | | | | do. | No. | |
| 386 | do. | do. | do. | 350 00 | 850 00 | 900 00 | 800 00 | 800 00 | do. | Sometimes. | |
| 387 | do. | do. | do. | 300 00 | | | | | do. | No. | |
| 388 | England. | do. | do. | 400 00 | | | | | England. | No. | |
| 389 | do. | do. | do. | 145 00 | | | | | do. | Sometimes. | |
| 390 | do. | do. | do. | | | | | | do. | No. | |
| 391 | United States. | do. | do. | | | | | | United States. | No. | |
| 92 | do. | do. | do. | | | | | | do. | | |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 393 | United States, | Bricklayer, | Weekly, | | | | | | United States, | |
| 394 | do. | do. | do. | | | | | | do. | |
| 395 | do. | do. | do. | | | | | | do. | No. |
| 396 | do. | do. | do. | $519 00 | $534 00 | $340 00 | $260 00 | $332 00 | do. | No. |
| 397 | do. | do. | do. | | | | | | do. | No. |
| 398 | do. | do. | do. | 62 75 | | | | | do. | |
| 399 | do. | do. | Monthly, | 600 00 | 1.200 00 | 1,200 00 | 1.200 00 | 1.200 00 | do. | No. |
| 400 | do. | do. | Weekly, | | | | | | do. | No. |
| 401 | do. | do. | do. | | | | | | do. | |
| 402 | do. | do. | do. | 125 00 | 600 00 | 600 00 | 600 00 | 600 00 | do. | No. |
| 403 | do. | do. | do. | 300 00 | 800 00 | 900 00 | 900 00 | 700 00 | do. | No. |
| 404 | do. | do. | do. | | | | | | do. | No. |
| 405 | do. | do. | do. | | | | | | do. | No. |
| 406 | do. | do. | do. | 318 71 | 450 00 | 975 37 | | | do. | |
| 407 | do. | do. | do. | 300 00 | 700 00 | 750 00 | 800 00 | 600 00 | do. | No. |
| 408 | do. | do. | do. | | | | | | do. | |
| 409 | do. | do. | do. | 60 00 | 100 00 | 150 00 | 90 00 | 90 00 | do. | No. |
| 410 | do. | do. | do. | 150 00 | 600 00 | 600 00 | 600 00 | 600 00 | do. | No. |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 411 | do. | do. | do. | | | | | | do. | No. |
| 412 | do. | do. | do. | | | | | | do. | No. |
| 413 | do. | do. | do. | 225 00 | 775 00 | | | | do. | No. |
| 414 | do. | do. | do. | | | | | | do. | No. |
| 415 | do. | do. | do. | 325 75 | 906 30 | 850 40 | 807 50 | 830 50 | do. | No. |
| 416 | do. | do. | do. | | | | | | do. | No. |
| 417 | do. | do. | do. | 488 68 | | | | | do. | No. |
| 418 | do. | do. | do. | | 950 00 | 950 00 | 950 00 | 950 00 | do. | No |
| 419 | do. | do. | do. | 450 00 | 350 00 | 375 00 | 350 00 | 375 00 | do. | No |
| 420 | do. | do. | do. | | | | | | do. | No. |
| 421 | Ireland, | do. | do. | 350 00 | 386 00 | 369 00 | 255 00 | 339 00 | do. | No. |
| 422 | do. | do. | do. | 195 80 | | | | | Ireland, | No. |
| 423 | England, | do. | do. | 150 00 | | | | | United States. | No. |
| 424 | Scotland, | do. | do. | 150 00 | 150 00 | 500 00 | 420 00 | 420 00 | England, | No |
| 425 | England. | do. | do. | | | | | | do. | No. |
| 426 | do. | do. | do. | | | | | | | No |
| 427 | United States, | do. | do. | 163 37 | 293 35 | 190 35 | 286 62 | 194 05 | United States, | No. |
| 428 | do. | do. | do. | 100 00 | 450 00 | 300 00 | 500 00 | 500 00 | do. | |
| 429 | do. | do. | do. | | | | | | do. | No. |
| 430 | do. | do. | do. | 195 00 | 378 00 | 585 00 | 283 00 | 1,010 00 | do. | No |
| 431 | do. | do. | do. | 292 50 | 785 00 | 813 00 | 800 00 | 915 00 | do. | No |
| 432 | do. | do. | do. | | | | | | do. | No. |
| 433 | Russia, | do. | do. | | | | | | Austria and U. S. | Sometimes. |
| 434 | United States, | do. | do. | | | | | | United States. | |
| 435 | England. | do. | do. | 240 00 | 220 00 | 220 00 | 230 00 | 200 00 | England, | No |
| 436 | United States, | do. | do. | 50 00 | 140 00 | 400 00 | 400 00 | 200 00 | United States. | No. |
| 437 | do. | do. | do. | 100 00 | 150 00 | 100 00 | 100 00 | 100 00 | do. | No. |
| 438 | England, | do. | do. | | | | | | England, | No. |
| 439 | United States, | | do. | | | | | | United States, | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly. | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 440 | United States, | Bricklayer, | Weekly, | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 441 | England, | do. | do. | ..... | ..... | ..... | ..... | ..... | England, | No. |
| 442 | United States, | do. | do. | $500 00 | $1000 00 | $1000 00 | $1000 00 | $1000 00 | United States, | No. |
| 443 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do. | |
| 444 | do. | do. | Weekly, | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 445 | England, | do. | do. | 700 00 | 700 00 | 700 00 | 700 00 | 500 00 | England, | Sometimes, |
| 446 | United States, | do. | do. | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 447 | do. | do. | do. | 350 00 | ..... | ..... | ..... | ..... | do. | No. |
| 448 | do. | do. | Monthly, | ..... | ..... | ..... | ..... | ..... | do. | Sometimes. |
| 449 | do. | do. | Weekly, | 400 00 | 800 00 | 800 00 | 800 00 | 800 00 | do. | No. |
| 450 | do. | do. | do. | 200 00 | 600 00 | 450 00 | 300 00 | 500 00 | do. | No. |
| 451 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 452 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 453 | Ireland, | do. | do. | 240 00 | 250 00 | 280 00 | 300 00 | 290 00 | Ireland. | No. |
| 454 | Scotland, | do. | do. | 360 00 | 360 00 | 360 00 | 360 00 | 360 00 | Scotland, | No. |
| 455 | United States, | do. | do. | 260 00 | 360 00 | 520 00 | ..... | ..... | United States, | No. |
| 456 | Ireland, | do. | do. | 121 50 | 583 20 | 770 60 | 770 50 | 680 20 | Ireland, | No. |
| 457 | United States, | do. | do. | 200 00 | ..... | ..... | ..... | ..... | United States, | Yes. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 458 | Australia, | do. | do. | | | | | | England. | Sometimes. |
| 459 | United States. | do. | do. | 300 00 | 600 00 | 600 00 | 600 00 | 600 00 | United States. | No. |
| 460 | do. | do. | Semi-monthly, | 239 14 | | | | | do. | No. |
| 461 | do. | do. | Weekly. | 289 50 | 678 48 | 650 00 | 520 00 | 590 00 | do. | No |
| 462 | do. | do. | do. | | | | | | do. | |
| 463 | do. | do. | do. | 130 00 | 165 00 | 180 00 | 152 00 | 198 00 | do. | No. |
| 464 | do. | do. | do. | 240 00 | 240 00 | 240 00 | 240 00 | 240 00 | do. | No. |
| 465 | do. | do. | do. | 312 00 | 624 00 | 624 00 | 624 00 | 624 00 | do. | No. |
| 466 | do. | do. | do. | | | | | | do. | No. |
| 467 | do. | do. | do. | | | | | | do. | No. |
| 468 | Ireland. | do. | do. | 260 12 | | | | | do. | No |
| 469 | United States, | do. | do. | | | | | | do. | No |
| 470 | do. | do. | do. | | | | | | do. | No |
| 471 | Scotland, | do. | do. | 90 00 | 150 00 | 165 00 | 190 00 | 150 00 | England, | No. |
| 472 | Ireland, | do. | do. | 240 00 | 250 00 | 280 00 | 300 00 | 290 00 | Ireland. | No. |
| 473 | England, | do. | do. | 100 00 | 200 00 | 175 00 | 192 00 | 144 00 | England. | No. |
| 474 | United States. | do. | do | | | | | | United States. | No. |
| 475 | Germany. | do. | do. | 125 00 | 250 00 | 250 00 | 250 00 | 250 00 | do. | No. |
| 476 | United States, | do. | do. | 175 00 | 300 00 | 225 00 | | | do. | No. |
| 477 | do. | do. | do. | 133 00 | 400 00 | 400 00 | 400 00 | 400 00 | do. | No |
| 478 | Scotland. | do. | do. | | | | | | Scotland. | No |
| 479 | England, | do. | do. | | | | | | England. | No |
| 480 | United States. | do. | do. | 92 00 | | | | | United States. | No. |
| 481 | do. | do. | do. | 200 00 | 650 00 | 650 00 | 650 00 | 650 00 | do | Sometimes. |
| 482 | Germany, | do. | do. | | | | | | do. | No. |
| 483 | United States. | do. | do. | 200 00 | 400 00 | 400 00 | 400 00 | 400 00 | do. | No. |
| 484 | do. | do. | do. | 212 53 | 646 51 | 469 58 | 1,197 00 | 225 32 | do. | No. |
| 485 | do. | do. | do. | | | | | | do. | No. |
| 486 | do. | do. | do. | 175 00 | 300 00 | 225 00 | 300 00 | 300 00 | do. | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 487 | United States, | Bricklayer, | Weekly, | ..... | ..... | ..... | ..... | ..... | United States, | *Yes. |
| 488 | do. | do. | do. | ..... | $639 83 | $733 08 | $602 72 | $839 24 | do. | No. |
| 489 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 490 | do. | do. | Weekly, | $168 00 | 416 00 | 800 00 | 1,012 00 | 1,150 00 | do. | No. |
| 491 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | |
| 492 | do. | do. | do. | 210 09 | 630 00 | 540 00 | 810 00 | 640 00 | do. | No. |
| 493 | do. | do. | do. | 35 10 | 487 19 | 356 73 | 214 90 | 380 35 | do. | No. |
| 494 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | |
| 495 | do. | do. | do. | 103 69 | 368 05 | 405 67 | 223 88 | 222 06 | do. | No. |
| 496 | do. | do. | do. | 310 00 | 500 00 | 500 00 | 500 00 | 500 00 | do. | Yes. |
| 497 | do. | do. | do. | 150 81 | ..... | ..... | ..... | ..... | do. | No. |
| 498 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | |
| 499 | do. | do. | do. | 90 00 | 780 00 | 700 00 | 480 00 | ..... | do. | No. |
| 500 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 501 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 502 | England, | do. | do. | 300 00 | 325 00 | 280 00 | 265 00 | 290 00 | England, | No. |
| 503 | do. | do. | do. | 243 00 | 640 40 | 876 80 | 972 00 | 876 80 | United States, | No. |

Contractor.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 504 | Scotland. . . . . | do. . . . | do. . . . . | 100 00 | 180 00 | 170 00 | 192 00 | 150 00 | England, . . . . . | No. |
| 505 | England, . . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | United States, . . . . . | No. |
| 506 | do. . . . . | do. . . . . | do. . . . . | 224 00 | 884 00 | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 507 | Scotland, . . . . . | do. . . . . | do. . . . . | 164 64 | 406 06 | 287 64 | . . . . . | . . . . . | do. . . . . | No. |
| 508 | Ireland, . . . . . | do. . . . . | do. . . . . | 400 00 | 800 00 | 800 00 | 800 00 | 800 00 | do. . . . . | No. |
| 509 | United States, . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 510 | do. . . . . | do. . . . . | do. . . . . | 180 00 | 500 00 | 600 00 | 565 00 | . . . . . | do. . . . . | No. |
| 511 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 512 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 513 | do. . . . . | do. . . . . | do. . . . . | 125 00 | 250 00 | 225 00 | 300 00 | 175 00 | do. . . . . | No. |
| 514 | do. . . . . | do. . . . . | do. . . . . | 150 00 | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 515 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 516 | do. . . . . | do. . . . . | do. . . . . | 234 00 | . . . . . | . . . . . | . . . . . | . . . . . | do | |
| 517 | do. . . . . | do. . . . . | do. . . . . | 150 00 | 300 00 | 150 00 | 175 00 | 190 00 | do. . . . . | Sometimes |
| 518 | Turkey. . . . . | do. . . . . | do. . . . . | 250 00 | 200 00 | 500 00 | 100 00 | 700 00 | do. . . . . | No. |
| 519 | Germany, . . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | Germany. . . . . | No. |
| 520 | England, . . . . . | do. . . . . | do. . . . . | 120 00 | 500 00 | 500 00 | 500 00 | 500 00 | England. . . . . | No. |
| 521 | Ireland, . . . . . | do. . . . . | do. . . . . | . . . . . | 75 00 | 150 00 | 350 00 | 375 00 | United States. . . . . | No. |
| 522 | Scotland. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 523 | United States, . . . . | do. . . . . | do. . . . . | 250 00 | 365 00 | 374 00 | 382 00 | 624 00 | do. . . . . | No. |
| 524 | do. . . . . | do. . . . . | do. . . . . | 240 00 | 640 00 | 635 00 | 610 00 | 600 00 | do. . . . . | No. |
| 525 | do. . . . . | do. . . . . | Bi-weekly, . . . . | 250 00 | 500 00 | 371 60 | 500 00 | 500 00 | do. . . . . | No |
| 526 | do. . . . . | do. . . . . | Weekly, . . . . . | 200 00 | 400 00 | 400 00 | 400 00 | 400 00 | do. . . . . | No |
| 527 | do. . . . . | do. . . . . | do. . . . . | 300 00 | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 528 | Germany, . . . . . | do. . . . . | do. . . . . | 211 00 | 418 19 | 428 00 | 367 00 | 453 00 | Germany. . . . . | No |
| 529 | United States. . . . . | do . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | United States, . . . . . | No |
| 530 | do. . . . . | do. . . . . | do. . . . . | 159 21 | 241 10 | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 531 | do. . . . . | do. . . . . | do. . . . . | 100 62 | 600 00 | 650 00 | 675 00 | 700 00 | do. . . . . | No |
| 532 | do. . . . . | do . . . . | do. . . . . | 300 00 | 393 00 | 400 00 | 400 00 | 300 00 | do. . . . . | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 533 | England, | Bricklayer, | Weekly, | $700 00 | $550 00 | ..... | $550 00 | $550 00 | England, | No. |
| 534 | United States, | do. | do. | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 535 | do. | do. | do. | ..... | 750 00 | $675 00 | 675 00 | 600 00 | do. | No. |
| 536 | do. | do. | do. | ..... | 840 00 | ..... | ..... | ..... | do. | No. |
| 537 | Ireland, | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 538 | England, | do. | do. | ..... | ..... | ..... | ..... | ..... | England, | No. |
| 539 | United States, | do. | do. | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 540 | do. | do. | do. | 210 00 | ..... | ..... | ..... | ..... | do. | No. |
| 541 | do. | do. | do. | 204 00 | 300 00 | 350 00 | ..... | ..... | do. | No. |
| 542 | do. | do. | do. | 100 00 | 350 00 | 275 00 | 275 00 | 275 00 | do. | No. |
| 543 | do. | do. | do. | 80 00 | 500 00 | 600 00 | 585 00 | 800 00 | do. | No. |
| 544 | do. | do. | do. | 268 00 | 710 00 | 619 00 | 670 00 | 768 00 | do. | No. |
| 545 | do. | do. | do. | 242 64 | ..... | ..... | ..... | ..... | do, | No. |
| 546 | do. | do. | do. | 600 00 | 1,200 00 | 800 00 | 400 00 | 600 00 | do. | No. |
| 547 | do. | do. | do. | 358 49 | ..... | ..... | ..... | ..... | do. | No. |
| 548 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 549 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 550 | do. | do. | Semi-monthly, | ..... | ..... | ..... | ..... | ..... | do. | No. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 551 | do. | do. | Weekly, | 200 00 | | | | | do. | No. |
| 552 | do. | do. | do. | | | | | | do. | No. |
| 553 | do. | do. | do. | 300 00 | 300 00 | 300 00 | 250 00 | 400 00 | do. | No. |
| 554 | do. | do. | do. | 300 00 | | | | | do. | |
| 555 | do. | do. | do. | 30 00 | 40 00 | | | | do. | No. |
| 556 | do. | do. | do. | 60 00 | 195 00 | | | | do. | No. |
| 557 | do. | do. | do. | | | | | | do. | No. |
| 558 | do. | do. | do. | 180 00 | | | | | do. | No. |
| 559 | do. | do. | do. | 200 00 | | | | | do. | No. |
| 560 | do, | do. | do. | | | | | | do. | No |
| 561 | do. | do. | do. | 60 00 | 990 00 | 990 00 | 890 00 | 790 00 | do. | No. |
| 562 | do. | do. | do. | | | | | | do. | No. |
| 563 | do. | do. | do. | | | | | | do. | |
| 564 | do. | do. | do. | | | | | | do. | No. |
| 565 | do. | do. | Monthly, | 700 00 | 1,300 00 | 1,300 00 | 1,300 00 | 1,300 00 | do. | No. |
| 566 | do. | do. | Weekly, | | | | | | do. | No. |
| 567 | do. | do. | do. | | | | | | do. | No. |
| 568 | do. | do. | do. | 400 00 | 400 00 | 400 00 | 400 00 | 400 00 | do. | No. |
| 569 | do. | do. | do. | | | | | | do. | No. |
| 570 | do. | do. | do. | 300 00 | 400 00 | 425 00 | 450 00 | 450 00 | do. | No. |
| 571 | Scotland, | do. | do. | 300 45 | 900 00 | 800 00 | 800 00 | 850 00 | do. | No. |
| 572 | Wales. | do. | do. | 30 00 | 200 00 | 500 00 | 300 00 | | do. | No. |
| 573 | England. | do. | do. | 300 00 | | | | | England, | No. |
| 574 | do. | do. | do. | | | 821 08 | 512 78 | 611 91 | do. | No. |
| 275 | Denmark. | do. | do. | 210 00 | 550 00 | 620 00 | 400 00 | 520 00 | Denmark, | No. |
| 576 | Ireland. | do. | do. | | | | | | United States, | No. |
| 577 | Scotland. | do. | do, | 225 00 | 500 00 | 500 00 | 600 00 | 500 00 | England. | No. |
| 578 | Ireland. | do. | do. | | | | | | Ireland, | No. |
| 579 | England, | do. | do. | | | | | | England. | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years 1893 | 1892 | 1891 | 1890 | Did you serve your apprenticeship in the United States? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| 580 | England, | Bricklayer, | Weekly, | ..... | ..... | ..... | ..... | ..... | England, | No. |
| 581 | United States, | do. | do. | $200 00 | $200 00 | $200 00 | $200 00 | $200 00 | United States, | No. |
| 582 | do. | do. | do. | 235 40 | 266 80 | 259 60 | 375 30 | 258 40 | do. | No. |
| 583 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 584 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 585 | do. | do. | do. | 191 40 | 600 50 | 700 00 | 600 00 | 750 00 | do. | No. |
| 586 | do. | do. | do. | 225 00 | 300 00 | 350 00 | 350 00 | 500 00 | do. | No. |
| 587 | England, | do. | do. | 125 00 | 250 00 | 135 00 | 220 00 | ..... | England, | No. |
| 588 | Germany, | do. | do. | 250 00 | 250 00 | 250 00 | 250 00 | 250 00 | Ger. and U. S., | No. |
| 589 | United States, | do. | do. | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 590 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 591 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 592 | England, | do. | do. | 130 00 | 500 00 | 500 00 | 500 00 | 500 00 | England, | No. |
| 593 | United States, | do. | do. | 150 00 | 700 00 | 700 00 | 700 00 | ..... | United States, | No. |
| 594 | do. | do. | do. | 541 88 | 924 35 | 974 70 | 866 51 | 975 87 | do. | No. |
| 595 | do. | do. | do. | 400 00 | 800 00 | 800 00 | 800 00 | 800 00 | do. | |
| 596 | England, | do. | do. | 230 00 | 650 00 | 600 00 | 700 00 | 850 00 | England, | No. |
| 597 | United States, | do. | do. | ..... | ..... | ..... | ..... | ..... | United States, | No. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 598 | England, | do. | do. | 158 55 | 286 25 | | | | do. | | No. |
| 599 | United States, | do. | do. | | | | | | do. | | No. |
| 600 | do. | do. | do. | 583 20 | 583 20 | 583 20 | 291 60 | 486 00 | do. | | No. |
| 601 | do. | do. | do. | 170 12 | 309 05 | | | | do. | | No. |
| 602 | do. | do. | do. | | | | | | do. | | No. |
| 603 | do. | do. | do. | | | | | | do. | | No |
| 604 | do. | do. | do. | 209 40 | 240 00 | 230 00 | 270 00 | 293 00 | do. | | No. |
| 605 | do. | do. | do. | 400 00 | | | | | do. | | No. |
| 606 | do. | do. | do. | | | | | | do. | | No. |
| 607 | do. | do. | do. | 42 00 | | | | | do. | | No. |
| 608 | do. | do. | do. | | | | | | do. | | No. |
| 609 | do. | do. | do. | | | | | | do. | | No. |
| 610 | do. | do. | do. | 150 00 | 400 00 | | | | do. | | No. |
| 611 | do. | do. | do. | | | | | | do. | | No. |
| 612 | do. | do. | do. | 225 00 | 450 00 | 450 00 | 450 00 | 450 00 | do. | | No. |
| 613 | do. | do. | do. | | | | | | do. | | No. |
| 614 | do. | do. | do. | 390 00 | 250 00 | 200 00 | 175 00 | 175 00 | do. | | No. |
| 615 | do. | do. | do. | | | | | | do. | | No. |
| 616 | do. | do. | do. | | | | | | do. | | No. |
| 617 | do. | do. | do. | 380 00 | | | | | do. | | No. |
| 618 | do. | do. | do. | | | | | | do. | | No. |
| 619 | do. | do. | do. | | 400 00 | | | | do. | | No. |
| 620 | do. | do. | do. | | | | | | do. | | No. |
| 621 | do. | do. | do. | 210 00 | 598 00 | | | | do. | | No. |
| 622 | do. | do. | do. | | | | | | do. | | No. |
| 623 | do. | do. | do. | 200 00 | 500 00 | 400 00 | 450 00 | 350 00 | do. | | No. |
| 624 | do. | do. | do. | 630 00 | 1,260 00 | 1,260 00 | 1,260 00 | 1,260 00 | do. | | No. |
| 625 | do. | do. | do. | | | | | | do. | | No. |
| 626 | do. | do. | do. | | | | | | do. | | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 627 | United States, | Bricklayer, | Weekly, | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 628 | do. | do. | do. | $480 00 | $450 00 | $450 00 | $400 00 | $400 00 | do. | No. |
| 629 | do. | do. | do. | 100 00 | 600 00 | 600 00 | 600 00 | 600 00 | do. | No. |
| 630 | do. | do. | do. | 135 00 | 720 00 | 720 00 | 720 00 | 720 00 | do. | No. |
| 631 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 632 | England, | do. | do. | ..... | ..... | ..... | ..... | ..... | England, | No. |
| 633 | Ireland, | do. | do. | 125 00 | 450 00 | 600 00 | 450 00 | 850 00 | United States, | No. |
| 634 | do. | do. | do. | 350 25 | 700 50 | 700 50 | 700 50 | 700 50 | do. | No. |
| 635 | do. | do. | do. | 500 00 | 600 00 | 650 00 | 450 00 | 700 00 | England, | Sometimes. |
| 636 | do. | do. | do. | 450 00 | 800 00 | 800 00 | 775 00 | 850 00 | United States, | No. |
| 637 | do. | do. | do. | 328 58 | 1,055 96 | 857 50 | 813 08 | 850 55 | England, | No. |
| 638 | do. | do. | Semi-monthly, | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 639 | do. | do. | Weekly, | 240 00 | 500 00 | 500 00 | 500 00 | 500 00 | do. | No. |
| 640 | do. | do. | do. | 192 00 | 468 00 | 444 00 | 441 00 | 500 00 | do. | No. |
| 641 | do. | do. | do. | 509 79 | 1,010 00 | 944 00 | 1,028 00 | ..... | do. | No. |
| 642 | do. | do. | do. | 100 00 | 100 00 | 150 00 | 150 00 | 150 00 | Ireland, | No. |
| 643 | England, | do. | do. | 250 00 | 200 00 | 200 00 | 275 00 | 300 00 | England, | No. |
| 644 | do. | do. | do. | 246 00 | 491 00 | 562 00 | 480 00 | 576 00 | do. | No. |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 645 | do. | do. | do. | 250 00 | 450 00 | 450 00 | 450 00 | 450 00 | do. | No. |
| 646 | do. | do. | do. | 200 00 | 600 00 | 600 00 | | | do. | No. |
| 647 | do. | do. | do. | 160 00 | | | | | do. | No. |
| 648 | do. | do. | do. | | | | | | do. | No. |
| 649 | do. | do. | do. | 300 00 | 600 00 | 600 00 | 550 00 | 400 00 | do. | No. |
| 650 | do. | do. | do. | | | | | | United States. | No. |
| 651 | do. | do. | do. | 350 00 | 800 00 | 750 00 | 600 00 | 760 00 | England. | No. |
| 652 | do. | do. | do. | | 936 00 | | | | do. | No. |
| 653 | do. | do. | do. | 150 00 | 400 00 | 550 00 | 550 00 | 400 00 | do. | No. |
| 654 | Russia, | do. | do. | 350 00 | | | | | Russia. | Piece. |
| 655 | Germany, | do. | do. | 500 00 | 800 00 | 800 00 | | | United States. | No. |
| 656 | do. | do. | do. | 135 00 | 195 00 | 135 00 | 200 00 | 200 00 | Germany. | No. |
| 657 | do. | do. | do. | | | | | | do. | No. |
| 658 | Switzerland. | do. | do. | 150 00 | 200 00 | 175 00 | 200 00 | 225 00 | France. | No. |
| 659 | *France. | do. | | | | | | | do. | |
| 660 | Scotland. | do. | Weekly. | 200 00 | 450 00 | 450 00 | | | United States. | No. |
| 661 | do. | do. | do. | 570 00 | 1,140 00 | 1,045 00 | 950 00 | 950 00 | Scotland. | No. |
| 662 | United States. | do. | do. | 123 60 | 335 54 | 246 66 | 317 84 | 308 03 | United States. | No. |
| 663 | do. | do. | do. | | | | | | do. | No. |
| 664 | do. | do. | do. | 300 00 | 725 00 | 725 00 | 725 00 | 725 00 | do. | No. |
| 665 | do. | do. | do. | | | | | | do. | No. |
| 666 | do. | do. | Semi-monthly. | 165 50 | 266 79 | 314 30 | 316 80 | 272 03 | do. | No. |
| 667 | do. | do. | Weekly. | 300 00 | 775 00 | 800 00 | 800 00 | 775 00 | do. | No. |
| 668 | do. | do. | do. | 120 00 | 360 00 | 320 00 | 180 00 | 180 00 | do | No. |
| 669 | do. | do. | do. | | | | | | do. | No. |
| 670 | do. | do. | do. | 300 00 | 450 00 | 450 00 | 350 00 | 400 00 | do. | No. |
| 671 | do. | do. | do. | 270 00 | 800 00 | 600 00 | 900 00 | 700 00 | do. | No. |
| 672 | do. | do. | do. | | | | | | do. | No. |
| 673 | do. | do. | do. | | 650 00 | 800 00 | 800 00 | 800 00 | do. | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 674 | United States, | Bricklayer, | Weekly, | $292 43 | $387 62 | $246 34 | ..... | ..... | United States, | No. |
| 675 | do. | do. | do. | 350 00 | ..... | ..... | ..... | ..... | do. | No. |
| 676 | do. | do. | do. | 368 11 | 413 53 | ..... | ..... | ..... | do. | No. |
| *677 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 678 | do. | do. | do. | 175 00 | 350 00 | 400 00 | $200 00 | $300 00 | do. | No. |
| 679 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 680 | do. | do. | do. | 250 00 | 450 00 | 450 00 | 450 00 | 450 00 | do. | No. |
| 681 | do. | do. | Monthly, | 300 00 | 450 00 | 450 00 | 450 00 | 450 00 | do. | No. |
| 682 | do. | do. | Weekly, | 375 00 | ..... | ..... | ..... | ..... | do. | No. |
| 683 | do. | do. | do. | 275 00 | 350 00 | 475 00 | 400 00 | 450 00 | do. | No. |
| 684 | do, | do. | Semi-monthly, | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 685 | do. | do. | Weekly, | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 686 | do. | do. | do. | 60 00 | ..... | ..... | ..... | ..... | do. | No. |
| 687 | do. | do. | do. | 229 27 | 740 25 | 728 00 | 400 00 | 800 25 | do. | No. |
| 688 | do. | do. | do. | ..... | ..... | ..... | ..... | ... | do. | No. |
| 689 | do. | do. | do. | 263 13 | 681 05 | 687 77 | ..... | ..... | do. | No. |
| 690 | do. | do. | do. | 120 00 | 120 00 | 120 00 | 250 00 | 300 00 | do. | No. |

* Employed as clerk from 1890 to June 15, 1894.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 691 | do | do. | do. | | | | | | do. | | |
| 692 | do | do. | do. | 325 00 | 800 00 | 800 00 | 800 00 | 800 00 | do. | | No. |
| 693 | do. | do. | do | 60 00 | 450 00 | 500 00 | 400 00 | 400 00 | do. | | No. |
| 694 | do. | do. | do. | | | | | | do. | | No |
| 695 | do. | do. | do. | | | | | | do. | | No |
| 696 | do. | do. | do. | | | | | | do. | | No |
| 697 | do. | do. | do. | | | | | | do. | | No. |
| 698 | do. | do. | Semi-monthly. | | | | | | do. | | No |
| 699 | do. | do. | Weekly. | 330 00 | | | | | do. | | No |
| 700 | do. | do. | do. | | | | | | do. | | No |
| 701 | do. | do. | do. | 250 00 | 350 00 | 350 00 | 350 00 | 350 00 | do. | | No |
| 702 | do. | do. | do. | 480 00 | | | | | do. | | No |
| 703 | do. | do. | do. | 459 53 | 819 87 | 857 53 | 769 57 | | do. | | No |
| 704 | do. | do. | do. | 223 63 | 368 75 | 255 53 | | | do. | | No |
| 705 | do | do. | do. | | | | | | do. | | No |
| 706 | do. | do. | do. | | 200 00 | 200 00 | 200 00 | | do | | No |
| 707 | do. | do. | do. | | | | | | do | | No |
| 708 | do. | do. | do. | | | | | | do | | No. |
| 709 | do. | do. | do. | 182 00 | 500 00 | 600 00 | 750 00 | 900 00 | do | | No |
| 710 | do. | do. | do. | | | | | | do. | | No |
| 711 | do. | do. | do. | 360 00 | 700 00 | 712 00 | | | do. | | No |
| 712 | do. | do. | do. | 125 00 | 300 00 | | | | do. | | No |
| 713 | do. | do. | do. | 400 00 | | | | | do. | | No. |
| 714 | do. | do. | do. | 631 80 | | | | | do | | No |
| 715 | do. | do. | Monthly. | 300 00 | 608 00 | 600 00 | | | do | | No. |
| 716 | do. | do. | Weekly. | | | | | | do | | Yes |
| 717 | do. | do. | do | 200 00 | | | | | do | | No. |
| 718 | do. | do. | do. | | | | | | do | | No |
| 719 | do | do. | do | 230 00 | 500 00 | 500 00 | 500 00 | 500 00 | do | | No |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 720 | United States. | Bricklayer. | Weekly. | ..... | ..... | ..... | ..... | ..... | United States. | |
| 721 | do. | do. | do. | $131 20 | $239 15 | $213 77 | $165 80 | $249 53 | do. | No. |
| 722 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 723 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 724 | do. | do. | do. | 325 00 | ..... | ..... | ..... | ..... | do. | No. |
| 725 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 726 | do. | do. | do. | 160 00 | 300 00 | 300 00 | 300 00 | 300 00 | do. | Sometimes. |
| 727 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 728 | do. | do. | do. | 594 70 | 1,247 10 | 1,247 10 | 1,247 10 | 1,247 10 | do. | No. |
| 729 | do. | do. | do. | 400 00 | 900 00 | 900 00 | 900 00 | 900 00 | do. | No. |
| *730 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do. | |
| 731 | do. | do. | Weekly. | 150 00 | 150 00 | 250 00 | ..... | ..... | do. | No. |
| 732 | do. | do. | Monthly. | 600 00 | 1,200 00 | 1,200 00 | 1,200 00 | 1,200 00 | do. | No. |
| 733 | do. | do. | Weekly. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 734 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 735 | do. | do. | do. | 75 00 | 170 00 | 200 00 | 160 00 | ..... | do. | No. |
| 736 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 737 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 738 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |

* Contractor.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 739 | do. | do. | do. | 431 80 | 850 00 | 950 00 | 875 00 | 950 00 | do | No |
| 740 | do. | do. | do. | 150 00 | 313 15 | 275 78 | 294 75 | 421 85 | do | No. |
| 741 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do | No. |
| 742 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do | No |
| 743 | do. | do. | do. | 374 00 | 867 24 | 918 06 | 889 10 | 839 29 | do. | No. |
| 744 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do | No. |
| 745 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do | |
| 746 | do. | do. | do. | 100 00 | 365 00 | 350 00 | 400 00 | 400 00 | do | No. |
| 747 | do. | do. | do. | ..... | 220 00 | 250 00 | 230 00 | 200 00 | do | No. |
| 748 | do. | do. | do. | 200 00 | ..... | ..... | ..... | ..... | do. | No. |
| 749 | do. | do. | do. | 200 00 | ..... | ..... | ..... | ..... | do. | No. |
| 750 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do | No. |
| 751 | do. | do. | do. | 200 00 | 400 00 | 450 00 | 450 00 | 450 00 | do | No. |
| 752 | do. | do. | do. | 702 00 | 1,400 00 | 1,400 00 | 1,200 00 | 1,200 00 | do | No. |
| 753 | do. | do. | do. | 315 00 | 800 00 | 960 00 | 800 00 | 800 00 | do | No |
| 754 | do. | do. | do. | 210 60 | 800 00 | 800 00 | 800 00 | 800 00 | do. | No |
| 755 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do | No. |
| 756 | do. | do. | do. | 50 00 | ..... | ..... | ..... | ..... | do. | No. |
| 757 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 758 | do. | do. | do. | ..... | 240 00 | 240 00 | 240 00 | 240 00 | do. | No. |
| 759 | do. | do. | do. | 400 00 | 1,000 00 | 784 00 | 700 00 | 950 00 | do. | No. |
| 760 | do. | do. | Semi-monthly, | 307 45 | ..... | ..... | ..... | ..... | do. | No. |
| 761 | do. | do. | Weekly, | 188 95 | 147 75 | 384 15 | 247 75 | 387 10 | do. | No. |
| 762 | do. | do. | do. | 150 00 | 200 00 | 312 00 | 312 00 | 250 00 | do. | No. |
| 763 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 764 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 765 | do. | do. | do. | 200 00 | 400 00 | 400 00 | 400 00 | 500 00 | do. | No. |
| 766 | England, | do. | do. | 450 00 | 800 00 | 800 00 | 400 00 | 400 00 | ..... | Yes. |

WORKMEN IN BUILDING TRADES—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Bricklayer, | . . . . . | . . . . . | Yes, . | None used, . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 2 | England, . . . | do. | Hour, . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 3 | United States, | do. | Piece. . . | 50 cts. per day, . . . | do. . | . . . . . | No, . . . . . | No, . . . . . | 9 | No. | |
| 4 | England, . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | No. |
| 5 | United States, | do. | . . . . . | . . . . . | do. . | Yes; one half, . . . . . | Yes, . . . . . | ½ lower, . . . . . | 9 | No. | |
| 6 | Germany, . . . | do. | Day, . . . | 10 per cent., . . . . . | do. . | . . . . . | . . . . . | . . . . . | . . . . | | |
| 7 | United States, | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 10 | Yes, . | No. |
| 8 | Germany, . . . | do. | . . . . . | . . . . . | do. . | None used, . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 9 | United States, | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 10 | Ireland, . . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 11 | United States, | do. | . . . . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 12 | Germany, . . . | do. | Piece, . . | . . . . . | do. . | No. . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 13 | do. . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 14 | United States. | do. | Hour, . . | . . . . . | do. . | No, . . . . . | . . . . . | . . . . . | 9 | No. | |
| 15 | England, . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 16 | do. . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 17 | United States, | do. | Day, . . . | . . . . . | do. . | No, . . . . . | . . . . . | . . . . . | 9 | No. | |
| 18 | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 | No. | |
| 20 | do. | do. | . . . . . | . . . . . | do . | None used, . . . . . | . . . . . | . . . . . | 9 | No. | |
| 21 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 22 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 | Yes, . | No. |
| 23 | Ireland, . . . . | do. | Piece. . . | $1 per day more, . . | do. | No, . . . . . | No. . . . . | No, . . . . . | 8 | No. | |
| 24 | United States, | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | No. |
| 25 | Ireland, . . . . | do. | Hour. . . | . . . . . | do. . | Yes, . . . . . | . . . . . | Lowered 5 ct. per hour, | 8 & 9 | No. | |
| 26 | United States, | do. | do. . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | Yes, . | No. |
| 27 | Germany, . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 28 | England, . . . | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 8 | No. | |
| 29 | Ireland, . . . . | do. | Hour, . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 30 | United States, | do | . . . . . | . . . . . | do. . | None used, . . . . . | . . . . . | . . . . . | 9 | No. | |
| 31 | do. | do. | . . . . . | . . . . . | do. . | Yes 60 per cent., . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 32 | do. | do | . . . . . | . . . . . | do. . | Yes 60 per cent., . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 33 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 34 | do. | do. | . . . . . | . . . . . | do. . | None used, . . . . . | . . . . . | . . . . . | 8 & 9 | Yes, . | No. |
| 35 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | Yes, . | Yes. |
| 36 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 37 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 38 | England, . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 39 | United States, | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 40 | England. . . . | do. | Piece. . | Very little, . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 41 | United States, | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | . . . . | Yes, . | No. |
| 42 | do. | do. | Hour, . . | 20 per cent., . . . . . | do. . | No. . . . . | . . . . . | . . . . . | 9 & 8 | No. | |
| 43 | Ireland, . . . . | do. | . . . . . | . . . . . | do. . | No. . . . . | No. . . . . | . . . . . | 9 | Yes, . | Yes. |
| 44 | United States, | do. | . . . . . | . . . . . | do. . | None, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 45 | do. | do. | Hour. . | . . . . . | do. . | None used. . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 46 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 47 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen. If so to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 48 | United States. | Bricklayer, | . . . . . | . . . . . | Yes, | No. . . . . | No, . . . . . | . . . . . | 9 | Yes, | No. |
| 49 | do. | do. | Hour, . . | No difference, . . . | do. . | No, . . . . . | . . . . . | . . . . . | 9 | No. | |
| 50 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | Yes, . . . . . | Lowered. . . . . | 9 | No. | |
| 51 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 52 | do. | do. | Hour. . . | No, . . . . . | do. . | No. . . . . | No, . . . . . | . . . . . | 8 & 9 | Yes, . | No. |
| 53 | Ireland, . . . | do, | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 | Yes, . | No. |
| 54 | United States, | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 55 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 56 | do. | do. | Hour, . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No, | |
| 57 | do. | do. | Piece, . | 33⅓ per cent., . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 58 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 59 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 60 | do. | do. | Hour, . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 61 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 | No. | |
| 62 | do. | do. | Hour, . . | 20 per cent. . . . . | do. . | . . . . . | Yes. . . . . | 20 per cent. lower, . . | 8 & 9 | No. | |
| 63 | do. | do. | do. . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 | No. | |
| 64 | do. | do. | do. . . | . . . . . | do. . | No machinery, . . . . . | . . . . . | . . . . . | 8 | No. | |
| 65 | do. | do. | do. . . | . . . . . | do. . | . . . . . | No . . . . . | . . . . . | 9 | No. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 66 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 67 | England, . . . | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 68 | United States, | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | Yes, . | No, |
| 69 | England, . . . | do. | ..... | ..... | do. | No. ..... | No. ..... | ..... | 8 & 9 | Yes, . | No. |
| 70 | United States. | do. | ..... | No difference, . . . . | do. | No. ..... | No. ..... | ..... | 9 | Yes, . | No. |
| 71 | do. | do. | ..... | ..... | do. | No, ..... | No, ..... | ..... | 8 & 9 | No. . | No. |
| 72 | Denmark, . . . | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 73 | Germany, . . . | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | Yes, . | No. |
| 74 | United States, | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 75 | do. | do. | Hour, . . | ..... | do. | ..... | No. ..... | ..... | 8 & 9 | No. | |
| 76 | do. | do. | ..... | ..... | do. | No, . . ..... | ..... | ..... | 8 & 9 | No. | |
| 77 | do. | do. | Piece. . . | $1 per day, . . . . . | do. | . . . ..... | ..... | ..... | 9 | No. | |
| 78 | do. | do. | ..... | ..... | do. | No machinery, . . . . . | ..... | ..... | 8 & 9 | No. | |
| 79 | England, . . . | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | Yes. . | No. |
| 80 | United States, | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 81 | do. | do. | Hour, . . | ..... | do. | ..... | Yes. ..... | 50 per cent. lower, . . | 9 | No. | |
| 82 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 83 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 84 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 85 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 86 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 87 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 88 | do. | do. | Piece, . | 11 per cent., . . . . | do. | No, ..... | No. ..... | ..... | 8 & 9 | No. | |
| 89 | England, . . . | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 90 | United States, | do. | Piece, . | 17 per cent., . . . . | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 91 | do. | do. | do. . | ..... | do. | ..... | No, ..... | ..... | 9 | No. | |
| 92 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 93 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 94 | do. | do. | Hour, . . | ..... | do. | ..... | No, ..... | ..... | 9 | No. | |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 95 | United States | Bricklayer | Piece. | 11 per cent. | Yes. | No. | No. | | 9 | No. | |
| 96 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 97 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 98 | do. | do. | | | do. | No machinery. | | | 8 & 9 | No. | |
| 99 | do. | do. | | | do. | | No. | | 9 | No. | |
| 100 | do. | do. | Hour. | | do. | No. | No. | | 9 | Yes. | No. |
| 101 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 102 | do. | do. | | | do. | No. | No. | | 9 | No. | |
| 103 | do. | do. | | | do. | No machinery. | | | 8 & 9 | No. | |
| 104 | do. | do. | Hour. | | do. | No. | No. | | 8 | No. | |
| 105 | do. | do. | Piece. | | do. | No. | No. | | 8 | No. | |
| 106 | do. | do. | | | do. | | | | 9 | No. | |
| 107 | do. | do. | Hour. | Very little. | do. | | | | 8 & 9 | No. | |
| 108 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 109 | do. | do. | Hour. | | do. | | | | 9 | No. | |
| 110 | do. | do. | | | do. | | | | 9 | No. | |
| 111 | do. | do. | Hour. | | do. | | No. | | 9 | No. | |
| 112 | do. | do. | | | do. | | | | 8 & 9 | No. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 113 | do. | do. | Piece. | | do. | | No, only laborers. | | 9 | No. | |
| 114 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 115 | do. | do. | | | do. | No. | No, | | 9 | No. | |
| 116 | do. | do. | Hour. | | do. | | | | 9 | No. | |
| * 117 | do. | do. | | | do. | No. | No, | | 9 | No. | |
| 118 | do. | do. | Piece. | Very little. | do. | | | | 8 & 9 | No. | |
| 119 | do. | do. | | | do. | Yes; displaced hod carriers and laborers. | Not bricklayers. | | 8 & 9 | No. | |
| 120 | do | do. | | | do. | | No. | | 9 | No. | |
| 121 | do. | do. | | | do. | No. | No. | | 9 | No. | |
| 122 | Germany. | do. | | | do. | No machinery. | No. | | 9 | No. | |
| 123 | Ireland. | do. | | | do. | | | | 8 & 9 | No. | |
| 124 | do. | do. | | | do. | | | | 9 | No. | |
| 125 | Russia. | do. | | | do. | | | | 9 | No. | |
| 126 | do. | do. | | | do. | No. | No. | | 9 | No. | |
| 127 | United States. | do. | | | do. | | | | 9 | | |
| 128 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 129 | England. | do. | | | do. | No machinery. | | | 9 | No. | |
| 130 | United States. | do. | | | do. | | | | 8 & 9 | No | |
| 131 | do. | do. | | | do. | No. | No, | | 9 | No. | |
| 132 | * do. | do. | | | do. | | | | | | |
| 133 | do. | do. | | | do. | No machinery. | | | 9 | No. | |
| 134 | do. | do. | | | do. | | | | 9 | No. | |
| 135 | do. | do. | | | do. | | | | 9 | No. | |
| 136 | do. | do. | Hour. | | do. | | | | 9 | Yes. | No |
| 137 | England. | do. | | No difference. | do. | | | | 8 & 9 | No. | |
| 138 | United States. | do. | | | do. | | | | 8 & 9 | No. | |
| 139 | England. | do. | Piece. | 15 per cent. more. | do. | | Laborers only. | Lowered $1 20 per day. | 9 | No | |

* Am now inspector of sewers in Philadelphia.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 140 | United States, | Bricklayer, | . . . . . | . . . . . | Yes, . | No machinery, . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 141 | England, . . . | do. | Same, . . | . . . . . | . . . . | No machinery, . . . . . | . . . . . | . . . . . | 8 & 9 | Yes, | No. |
| 142 | United States. | do. | . . . . . | . . . . . | . . . . | No, . . . . . | No, . . . . . | . . . . . | 8 & 9 | No. | |
| 143 | do. | do. | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 144 | England. . . . | do. | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 145 | United States, | do. | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 146 | do. | do. | Same, . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 147 | do. | do. | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 148 | do. | do. | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 149 | do. | do. | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 150 | do. | do. | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 151 | do. | do. | . . . . . | . . . . . | do. . . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 152 | do. | do. | Hour, . . | . . . . . | do. . | . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 153 | do. | do. | do. . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 154 | England, . . . | do. | do. . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 155 | United States, | do. | . . . . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 9 | Yes, . | No. |
| 156 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| | | | | | | | | | 9 | No. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 157* | do. | do. | ..... | ..... | do. | ..... | No, | ..... | 8 & 9 | No, | |
| 158 | do. | do. | ..... | ..... | do. | No, | No, | ..... | 9 | No. | |
| 159 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | .... | .... | |
| 160 | do. | do. | Hour, | ..... | do. | No. | No, | ..... | 9 | No. | |
| 161 | do. | do. | Piece, | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 162 | Ireland, | do. | ..... | No difference, | do. | No machinery, | ..... | ..... | 9 | No. | |
| 163 | United States, | do | ..... | ..... | do. | ..... | ..... | ..... | 9 | | |
| 164 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 165 | England, | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 166 | United States, | do. | ..... | ..... | do. | No machinery, | ..... | ..... | 9 | No. | |
| 167 | England, | do. | ..... | No difference, | do. | No. | No, | ..... | 9 | No. | |
| 168 | Denmark, | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | | |
| 169 | United States, | do. | ..... | ..... | do. | No machinery, | ..... | ..... | 9 | No. | |
| 170 | do. | do. | ..... | ..... | do | ..... | ..... | ..... | 8 & 9 | No. | |
| 171 | Ireland, | do. | ..... | ..... | do. | No machinery, | ..... | ..... | 9 | No. | |
| 172 | England, | do. | ..... | ..... | do. | No. | No, | ..... | 9 | No. | |
| 173 | United States. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 174 | England, | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 175 | United States. | do. | ..... | ..... | do. | No machinery, | ..... | ..... | 9 | No. | |
| 176 | England | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 177 | Scotland, | do. | ..... | ..... | do. | No machinery, | ..... | ..... | 8 & 9 | No. | |
| 178 | Ireland, | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | Yes, | No. |
| 179 | Scotland, | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 180 | United States, | do. | Hour, | ..... | do. | No, | No. | ..... | 9 | No. | |
| 181 | do. | do. | ..... | ..... | do. | No, | No. | ..... | 9 | No. | |
| 182 | Germany, | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 183 | United States, | do. | Piece, | ..... | do. | ..... | No. | ..... | 9 | No. | |
| 184 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |

* Superintendent.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If their is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 185* | United States. | Bricklayer. | ..... | ..... | Yes, | ..... | ..... | ..... | .... | Yes. | |
| 186 | England, . . | do. | ..... | ..... | do. | ..... | ..... | ..... | .... | | |
| 187 | United States. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 188 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | Yes, | Sav. fund. |
| 189 | do. | do. | ..... | ..... | do. | No, ..... | No. ..... | ..... | 9 | No. | |
| 190 | do. | do. | Hour, | ..... | do. | No machinery, ..... | ..... | ..... | 8 & 9 | Yes. | Yes. |
| 191 | do. | do. | ..... | No difference, ... | do. | ..... | ..... | ..... | 9 | No. | |
| 192 | Ireland, ... | do. | Piece, | 12 per cent more, . | do. | Yes, ..... | No, ..... | ..... | 9 | Yes, | Yes. |
| 193 | United States, | do. | ..... | ..... | do. | No machinery, ..... | ..... | ..... | 8 | Yes, | Yes. |
| 194 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 195† | do. | do. | Hour, | ..... | do. | No, ..... | No. ..... | ..... | 9 | No. | |
| 196 | Ireland, ... | do. | do. | ..... | do. | ..... | ..... | ..... | 9 | Yes, | Yes. |
| 197 | United States. | do. | do. | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 198 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 199 | England, ... | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 200 | United States. | do. | ..... | ..... | do. | ..... | ..... | ..... | .... | No. | |

* Employer in 1894. † Sewer inspector—$100 per month.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 201 | England, . . . | do. | . . . . . | . . . . . | do. . | Yes; hod-carriers, considerable. | Yes; hod-carriers. . | Lowered 50 per cent. . | 9 | No. | |
| 202 | Scotland, . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 203 | Germany, . . | do. | . . . . . | . . . . . | do. . | No. . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 204 | United States. | do. | Hour, . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 205 | do. | do. | Piece, . | 10 per cent. more, . | do. . | No machinery, . . . . . | . . . . . | . . . . . | 9 | No. | |
| 206 | do. | do | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 207 | do | do. | Hour, . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 208 | do. | do | . . . . . | . . . . . | do. . | No. . . . . | No. . . . . | . . . . . | 9 | No. | |
| 209 | Ireland, . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 | Yes. . | Yes. |
| 210 | Germany. . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 211 | United States, | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 212 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | . . . . | | |
| 213 | do. | do. | . . . . . | No. . . . . | do. . | Yes, . . . . . | Yes. . . . . | Lowered, . . . . . | 9 | No. | |
| 214 | do. | do | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No | |
| 215 | England, . . . | do. | . . . . . | . . . . . | do. . | No. . . . . | No. . . . . | . . . . . | 8 & 9 | No. | |
| 216 | United States, | do. | . . . . . | . . . . . | do. . | No. . . . . | No, . . . . . | . . . . . | 9 | Yes. . | Yes. |
| 217 | do. | do. | Hour, . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 218 | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | No. . . . . | . . . . . | 9 | No. | |
| 219 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 220 | Ireland, . . . | do. | . . . . . | . . . . . | do. . | Machine made mortar has displaced mortar men. | Yes; hod carriers. . | Lowered 40 per cent., | 9 | No. | |
| 221 | United States, | do. | . . . . . | . . . . . | do. . | No, . . . . . | No. . . . . | . . . . . | 9 | No. | |
| 222 | do. | do | Piece, . . | 33 per cent. more, . | do. . | No machinery. . . . . | . . . . . | . . . . . | 9 | No. | |
| 223 | Sweden. . . . | do. | Hour, . . | . . . . . | do. . | . . . . . | No. . . . . | . . . . . | 8 | No. | |
| 224 | United States, | do. | Piece, . . | . . . . . | do. . | . . . . . | Yes. . . . . | Lowered. . . . . | 8 | No. | |
| 225 | England. . . . | do. | . . . . . | . . . . . | do. . | No. . . . . | No. . . . . | . . . . . | 9 | No. | |
| 226 | United States, | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 227 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 228 | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | No. . . . . | . . . . . | 8 & 9 | No | |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day. | If there is a difference, state how much. | Are apprentices employed in your trade. | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent. | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 229 | United States, | Bricklayer, | Piece, . . | A great deal, . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 230 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 | No. | |
| 231 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 232 | East India, . . | do. | Piece, . . | 10 per cent. more, . | do. . | No, . . . . . | No, . . . . . | . . . . . | 8 & 9 | Yes, . | No. |
| 233 | United States, | do. | . . . . . | . . . . . | do. . | No, . . . . . | No. . . . . | . . . . . | 9 | No. | |
| 234 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 235 | Ireland, . . . | do. | Hour, . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 236 | United States, | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 237 | do. | do. | . . . . . | . . . . . | do. . | No. . . . . | . . . . . | . . . . . | 9 | No. | |
| 238 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 239 | do. | do. | Hour, . . | . . . . . | do. . | No machinery, . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 240 | Scotland, . . . | do. | Hour, . . | . . . . . | do. . | No, . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 241 | United States. | do. | . . . . . | . . . . . | do. . | No. . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 242 | do. | do. | Piece, . | 10 per cent. more, . | do. . | . . . . . | . . . . . | . . . . . | . . . . | Yes, . | No. |
| 243 | Ireland, . . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 244 | United States, | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 245 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | | |
| 246 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 247 | do. | do. | ..... | ..... | do. | No, ..... | No ..... | ..... | 8 | No. | |
| 248 | do. | do. | ..... | ..... | do. | No machinery, ..... | ..... | ..... | 9 | Yes, | No. |
| 249 | do. | do. | Hour. | Very little, ..... | do. | Yes; hod-carriers, ..... | No, ..... | ..... | 9 | No. | |
| 250 | England, ... | do. | ..... | ..... | do. | Yes, ..... | Yes. ..... | 50 per cent. lower, | 8 & 9 | No. | |
| 251 | United States, | do. | Piece, | 33 per cent. more, | do. | No. ..... | No, ..... | ..... | 9 | No. | |
| 252 | do. | do. | ..... | ..... | do. | No, ..... | No. ..... | ..... | 9 | No. | |
| 253 | England, ... | do. | ..... | ..... | do. | ..... | No, ..... | ..... | 8 & 9 | No. | |
| 254 | United States, | do. | Piece, | ..... | do. | No. ..... | No, ..... | ..... | 9 | No. | |
| 255 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 256 | do. | do. | ..... | ..... | do. | No machinery, ..... | ..... | ..... | 8 & 9 | Yes, | Yes. |
| 257 | do. | do. | Hour, | ..... | do. | No, ..... | No, ..... | ..... | 8 | No. | |
| 258 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 259 | England, ... | do. | ..... | ..... | do. | No, ..... | No. ..... | ..... | 9 | No. | |
| 260 | Germany, ... | do. | ..... | ..... | do. | Yes; hod-carriers, ..... | Yes, ..... | Lower. ..... | 9 | No. | |
| 261 | United States. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | Yes, | No. |
| 262 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 263 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 264 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | Yes, | No. |
| 265 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 266 | do. | do. | ..... | ..... | do. | No, ..... | No, ..... | ..... | 9 | No. | |
| 267 | Hungary, ... | do. | ..... | ..... | do. | No, ..... | No, ..... | ..... | 8 & 9 | Yes, | No. |
| 268 | United States, | do. | ..... | ..... | do. | No machinery, ..... | ..... | ..... | 8 & 9 | No. | |
| 269 | do. | do. | Piece, | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 270 | do. | do. | Hour, | ..... | do. | Yes, ..... | ..... | ..... | 9 | Yes. | No. |
| 271 | do. | do. | Hour, | ..... | do. | No, ..... | No, ..... | ..... | 8 & 9 | No. | |
| 272 | do. | do. | Hour, | ..... | do. | No machinery. ..... | ..... | ..... | 8 & 9 | No. | |
| 273 | England, ... | do. | Hour, | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 274 | United States, | do. | Hour, | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 275 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | .... | No. | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 276 | United States, | Bricklayer, | ..... | ..... | Yes, | ..... | ..... | ..... | 9 | No. | |
| 277 | do. | do. | Hour, | ..... | do. | No machinery, | No, | ..... | 8 & 9 | Yes, | No. |
| 278 | do. | do. | Hour, | ..... | do. | No machinery, | ..... | ..... | 8 & 9 | No. | |
| 279 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 10 | Yes, | No. |
| 280 | England, | do. | ..... | ..... | do. | None, | ..... | ..... | 8 & 9 | No. | |
| 281 | United States. | do. | Piece, | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 282 | do. | do. | Hour, | ..... | do. | No, | ..... | ..... | 8 & 9 | No. | |
| 283 | do. | do. | ..... | ..... | do. | No machinery, | ..... | ..... | 9 | No. | |
| 284 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 285 | Ireland, | do. | ..... | ..... | do. | None, | No, | ..... | 9 | No. | |
| 286 | England, | do. | ..... | ..... | do. | No machinery, | ..... | ..... | 9 | No. | |
| 287 | United States, | do. | Piece, | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 288 | do. | do. | ..... | ..... | do. | No. | No, | ..... | 8 | No. | |
| 289 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 290 | do. | do. | ..... | ..... | do. | No machinery | ..... | ..... | 8 & 9 | No. | |
| 291 | do. | do. | ..... | ..... | do. | No, | No, | ..... | 8 & 9 | No. | |
| 292 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | | |

* Report of wages by the year.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 293 | England, . . . | do. | No. . . . | . . . . . | do. . | Yes, . . . . . | Yes, . . . . . | Lowered laborers $1 00 a day, . . . . | 8 & 9 | No. | |
| 294 | United States, | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 295 | do. | do. | . . . . . | . . . . . | do, | . . . . . | . . . . . | . . . . . | 8 & 9 | Yes, | Yes. |
| 296 | do. | do, | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 | No. | |
| 297 | do. | do. | Hour, . . | . . . . . | do. . | No. . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 298 | do. | do. | . . . . . | About the same, . . | do. . | No. . . . . | No. . . . . | . . . . . | 9 | No. | |
| 299 | do | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 300 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | | |
| 301 | United States, | do. | Hour, . . | . . . . . | do | . . . . . | . . . . . | . . . . . | 8 & 9 | Yes, | No. |
| 302 | do. | do. | . . . . . | . . . . . | do. . | No machinery, . . . . . | . . . . . | . . . . . | 9 | No. | |
| 303 | England. . . . | do. | . . . . . | . . . . . | do. . | No, . . . . . | No. . . . . | No. . . . . | 9 | No. | |
| 304 | United States, | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 305 | do. | do. | Hour. . . | . . . . . | do. . | No. . . . . | No. . . . . | . . . . . | 8 & 9 | No. | |
| 306* | Germany, . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | | | |
| 307 | United States, | do. | . . . . . | . . . . . | do. . | Hoisting machinery has displaced hod-carriers. | Yes; hod carriers. . | Lowered one dollar per day, | 8 & 9 | No. | |
| 308 | Ireland, . . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 309 | do. . . . . | do, | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | Yes. | No |
| 310 | United States. | do. | . . . . . | . . . . . | do. . | No. . . . . | No. . . . . | . . . . . | 9 | No. | |
| 311 | do. | do. | Hour, . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 312 | do. | do. | . . . . . | . . . . . | do. . | Yes; hoisting machinery. | Yes; hod-carriers. . | Lowered $1.20 per day. | 8 & 9 | No. | |
| 313 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 314 | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 8 | No | |
| 315 | do. | do. | . . . . . | . . . . . | do. . | No. . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 316 | do. | do. | . . . . . | . . . . . | do . | . . . . . | . . . . . | . . . . . | 8 | No | |
| 317 | do. | do. | Hour, . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 | No | |
| 318 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 319 | do. | do. | Piece. . . | 25 per cent. more. . | do. . | . . . . . | . . . . . | . . . . . | | | |

* A conductor

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 320 | Ireland, | Bricklayer, | Hour, | | Yes, | No, | | | 9 | No. | |
| 321 | United States, | do. | | | do. | | | | 8 | No. | |
| 322 | England, | do. | | | do. | | | | 9 | No. | |
| 323 | United States, | do. | | | do. | | | | 8 & 9 | No. | |
| 324 | do. | do. | Hour, | | do. | | | | 8 & 9 | No. | |
| 325 | do. | do. | | More, | do. | No, | No, | | 8 | No. | |
| 326 | do. | do. | | | do. | | | | 8 & 9 | Yes, | No. |
| 327 | do. | do. | Hour, | | do. | No, | No, | | 9 | No. | |
| 328 | do. | do. | | | do. | No. | | | 9 | No. | |
| 329 | do. | do. | | | do. | | | | 9 | No. | |
| 330 | do. | do. | Hour, | More. | do. | Yes, | No, | | 8 & 9 | No. | |
| 331 | do. | do. | | | do. | | No, | | 8 & 9 | No. | |
| 332 | do. | do. | | | do. | | | | 9 | Yes, | No. |
| 333 | do. | do. | | | do. | | | | 8 & 9 | Yes, | No. |
| 334 | do. | do. | Hour, | | do. | | | | 8 & 9 | No. | |
| 335 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 336 | do. | do. | Piece, | About three dollars, | do. | | | | 10 | No. | |
| 337 | England, | do. | | | do. | No, | No, | | 9 | Yes, | Yes. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 338 | United States, | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | | |
| 339 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 340 | do. | do | ..... | ..... | do. | ..... | ..... | ..... | 9 | Yes, | No. |
| 341 | do. | do. | Piece, | 20 per cent. more | do. | None, | No, | ..... | 9 | Yes, | Yes. |
| 342 | do. | do. | ..... | ..... | do. | do. | Yes, | Lowered 10 per cent., | | No. | |
| 343 | do. | do. | Piece, | 10 per cent. more, | do | ..... | Yes; hod carriers, | Lowered 50 per cent., | 9 | No. | |
| 344 | Germany, | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 345 | England, | do. | Hour, | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 346 | United States, | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | Yes, | No |
| 347 | do. | do. | Hour, | ..... | do. | None, | No, | ..... | 9 | No. | |
| 348 | England, | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 349 | United States, | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | Yes, | No. |
| 350 | do. | do. | Hour, | ..... | do. | No, | No, | ..... | 9 | No. | |
| 351 | do. | do. | ..... | ..... | do. | No machinery, | No. | ..... | 8 & 9 | No | |
| 352 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No | |
| 353 | England, | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 354 | do. | do. | ..... | ..... | do. | No, | No. | ..... | 8 & 9 | No. | |
| 355 | United States, | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | Yes, | No. |
| 356 | England, | do. | ..... | ..... | do. | No machinery, | ..... | ..... | 8 & 9 | No. | |
| 357 | United States, | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 358 | England, | do. | ..... | ..... | do | Hoisting machinery reduced laborers 50 p. c. | Yes; laborers, | About 25 p. c. lower, | 8 & 9 | No | |
| 359 | United States, | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 360 | do. | do. | ..... | ..... | No, | ..... | ..... | ..... | 8 & 9 | No. | |
| 361 | do. | do. | ..... | ..... | Yes, | None, | No, | ..... | 9 | No. | |
| 362 | do. | do. | ..... | ..... | do | ..... | ..... | ..... | 9 | No. | |
| 363 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | | |
| 364 | do. | do. | ..... | ..... | do | None, | No, | ..... | 8 & 9 | No. | |
| 365 | do. | do | ..... | ..... | do | ..... | ..... | ..... | 8 & 9 | No. | |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 366 | United States. | Bricklayer, | | | Yes, | | | | 9 | No, | |
| 367 | do. | do | | | do. | None, | No, | | 8 & 9 | Yes, | No. |
| 368 | do. | do. | Piece, | | do. | do. | No. | | 8 & 9 | No. | |
| 369 | do. | do. | | | do. | No machinery, | | | 8 & 9 | No. | |
| 370 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 371 | do. | do. | | | do. | No, | No. | | 9 | No. | |
| 372 | do. | do. | | | do. | | | | 8 & 9 | | |
| 373 | do. | do. | | | do. | | | | 8 & 9 | No | |
| 374 | do. | do. | | | do. | | | | 9 | No. | |
| 375 | do. | do. | | | do. | | | | 9 | No | |
| 376 | do. | do. | | | do. | | | | 9 | No. | |
| 377 | do. | do. | Hour. | | do. | | | | 8 & 9 | No. | |
| 378 | do. | do. | | | do. | No. | No. | | 8 & 9 | No. | |
| 379 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 380 | do. | do. | | | do. | | | | 10 | No | |
| 381 | do. | do. | | | No. | | | | 9 | No. | |
| 382 | de. | do. | | | Yes, | | | | 8 & 9 | No. | |
| 383 | do. | do. | | | do. | | | | 9 | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 384 | do. | do | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 385 | do. | do. | ..... | ..... | do. | No, ..... | No. ..... | ..... | 8 & 9 | No | |
| 386 | do. | do. | Piece. . . | About $1 more a day. | do. | No, ..... | No. ..... | ..... | 8 & 9 | Yes. . | No. |
| 387 | do | do. | ..... | ..... | do. | No machinery, ..... | ..... | ..... | 9 | Yes, . | No. |
| 388 | England. . . . | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | Yes, . | No. |
| 389 | do. . . . | do. | Piece, . . | About 10 p. c. more. | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 390 | do. . . . | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No | |
| 391 | United States, | do. | Hour, . . | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 392 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 10 | Yes, | o. |
| 393 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | . . | No. | |
| 394 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | Yes. | No. |
| 395 | do. | do | ..... | ..... | do. | No, ..... | ..... | ..... | 8 | No. | |
| 396 | do. | do. | ..... | ..... | do. | No machinery. ..... | ..... | ..... | 9 | No. | |
| 397 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 398 | do, | do. | ..... | ..... | do | ..... | ..... | ..... | 9 | No | |
| 399 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 10 | Yes, | Yes |
| 400 | do | do. | Hour. . . | ..... | do. | ..... | No. ..... | ..... | 9 | No. | |
| 401 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 402 | do. | do. | ..... | ..... | do | No. ..... | No, ..... | ..... | 9 | No. | |
| 403 | do. | do. | ..... | ..... | do. | Yes; hod carriers, ..... | Hod carriers wages, | Lower'd them 50c. day | 8 & 9 | No. | |
| 404 | do | do. | Hour. . . | ..... | do. | No, ..... | Yes, ..... | ..... | 9 | No. | |
| 405 | do. | do. | ..... | ..... | do | ..... | ..... | ..... | 8 & 9 | No. | |
| 406 | do | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 407 | do | do | Hour. . . | ..... | do. | No machinery. ..... | No. ..... | ..... | 9 | No. | |
| 408 | do. | do | ..... | ..... | do | ..... | ..... | ..... | 9 | No. | |
| 409 | do. | do | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 410 | do | do. | ..... | ..... | do. | No machinery. ..... | ..... | ..... | 9 | Yes, | No. |
| 411 | do. | do | ..... | ..... | do. | No machinery. ..... | ..... | ..... | 9 | No. | |
| 412 | do | do. | Hour, . . | ..... | do. | ..... | No. ..... | ..... | 8 & 9 | No. | |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employe displaced any work en, if so, to what xtent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a days's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 413 | United States, | Bricklayer, | ..... | ..... | Yes, | ..... | ..... | ..... | 8 & 9 | Yes, | No. |
| 414 | do. | do. | ..... | ..... | do. | No, | No, | ..... | 9 | No. | |
| 415 | do. | do. | ..... | ..... | do. | No machinery, | ..... | ..... | 8 & 9 | No. | |
| 416 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 417 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 418 | do. | do. | ..... | ..... | do. | ..... | No, | ..... | 9 | No. | |
| 419 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 420 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 421 | Ireland, ... | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | Yes. | No. |
| 422 | do. ... | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | Yes. | No. |
| 423 | England. ... | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | Yes. | |
| 424 | England, ... | do. | ..... | ..... | do. | No, | No, | ..... | 8 & 9 | No. | |
| 425 | Scotland, .. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 426 | do. ... | do. | ..... | ..... | do. | ..... | ..... | ..... | .... | .... | |
| 427 | United States, . | do. | ..... | ..... | do. | No, | No, | ..... | 8 & 9 | Yes. | Yes. |
| 428 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | .... | |
| 429 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 430 | do. | do. | ..... | ..... | do. | No. | ..... | ..... | 9 | No. | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 431 | do. | do. | | | | do. | No. | No, | | 9 | No. | |
| 432 | do. | do. | | | | do. | No, | No, | | 8 & 9 | No. | |
| 433 | Russia, | do. | Hour, | Same, | | do. | | | | 9 | No. | |
| 434 | United States, | do. | | | | do. | No machinery. | | | 9 | No. | |
| 435 | England, | do. | | | | do. | | | | 8 & 9 | No. | |
| 436 | United States, | do. | | | | do. | No. | | | 8 & 9 | No. | |
| 437 | do. | do. | Hour, | | | do. | | No, | | 9 | No. | |
| 438 | England, | do. | | | | do. | No. | No, | | 8 & 9 | No. | |
| 439 | United States. | do. | | | | do. | | | | 8 | No. | |
| 440 | United States. | do. | | | | do. | Yes; hoisting machinery, | Lowered hod carriers | About forty per cent. | 8 & 9 | No. | |
| 441 | England. | do. | | | | do. | No, | No. | | 9 | No. | |
| 442 | United States, | do. | | | | do. | No, | No, | | 8 & 9 | No. | |
| 443 | do. | do. | | | | do. | | | | 9 | No. | |
| 444 | do. | do. | | | | do. | | | | 8 & 9 | No. | |
| 445 | England, | do. | | | | do. | | | | 9 | No. | |
| 446 | United States. | do. | | | | do. | No. | | | 8 | No. | |
| 447 | do. | do | | | | do. | | | | 8 & 9 | No. | |
| 448 | do. | do. | | | | do. | No. | No, | | 9 | No. | |
| 449 | do. | do. | | | | do. | | | | | No. | |
| 450 | do. | do. | | | | do. | | | | 9 | No. | |
| 451 | do. | do. | | | | do. | No machinery, | | | 8 | No | |
| 452 | do. | do. | | | | do. | | | | 9 | No. | |
| 453 | Ireland, | do. | | | | do. | | | | 8 & 9 | No. | |
| 454 | Scotland, | do. | | | | do | | | | 8 | | |
| 455 | United States, | do. | | | | do. | | | | 9 | No. | |
| 456 | Ireland, | do. | Piece, | About 25 per cent. more. | | do. | No. | No. | | 9 | No. | |
| 457 | United States, | do. | Same, | About the same, | | do. | | | | 9 | Yes, partly, | Yes |
| 458 | Australia, | do. | | | | do. | | | | 9 | | |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how mveh? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 459 | United States, | Bricklayer, | Hour, | Considerable. | Yes, | No.* | | | 9 | No. | |
| 460 | do. | do. | | | do. | No. | No. | | 10 | No. | |
| 461 | do. | do. | | | do. | | | | 8 & 9 | Yes, | Yes. |
| 462 | do. | do | | | do. | | | | 8 & 9 | Yes, | No. |
| 463 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 464 | do. | do. | | | do. | | | | 9 | No. | |
| 465 | do. | do. | Piece, | | do. | No. | No. | | 9 | No. | |
| 466 | do. | do. | | | do. | | | | 9 | Yes, | Yes. |
| 467 | do. | do. | | | do. | | | | 9 | No. | |
| 468 | Ireland, | do. | | | do. | Hod carriers, | Yes; laborers, | Lowered 43 per cent., | 8 & 9 | No. | |
| 469 | United States, | do. | | | do. | No machinery. | No. | | 9 | No. | |
| 470 | do. | do. | | | do. | | | | 9 | No. | |
| 471 | Scotland, | do. | Hour, | No. | do. | No. | No. | | 8 & 9 | No. | |
| 472 | Ireland, | do. | | | do. | | | | 8 & 9 | No. | |
| 473 | England, | do. | | | do. | No. | No. | | 8 & 9 | No. | |
| 474 | United States, | do. | | | do. | No. | | | 9 | | |
| 475 | Germany. | do. | | | do. | | | | 9 | No | |

* I feel that machinery has benefited labor to some extent.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 476 | United States. | do. | . . . . . | . . . . . | do. . | No. . . . . | No, . . . . . | . . . . . | 8 & 9 | No | |
| 477 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | Yes, | Yes. |
| 478 | Scotland. . . | do | Piece, . . | About 45 per cent.. | do. | . . . . . | . . . . . | . . . . . | 8 & 9 | No | |
| 479 | England, . . . | do. | Piece. . . | Very little more, . . | do. . | No. . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 480 | United States. | do. | Hour. . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 481 | do. | do. | Piece, . . | Very little difference | do. . | *No. . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 482 | Germany, . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | No |
| 483 | United States. | do. | Piece, . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | Yes, . | No. |
| 484 | do. | do | Piece, . . | About 25 p. c. more. | do. . | No. . . . . | No. . . . . | . . . . . | 8 & 9 | No. | |
| 485 | do | do | . . . . . | . . . . . | do. . | No machinery, . . . . . | . . . . . | . . . . . | 8 | Yes, . | No. |
| 486 | do | do | . . . . . | . . . . . | do . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 487 | do | do | . . . . . | . . . . . | do | . . . . . | . . . . . | . . . . . | 9 | Yes, . | No. |
| 488 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 489 | do | do | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | No. |
| 490 | do. | do | . . . . . | . . . . . | do. . | No machinery, . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 491 | do | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 492 | do. | do. | Piece. . . | About 50 p. c. more. | do. . | . . . . . | Yes. . . . . | Lowered 16 per cent. . | 8 | No. | |
| 493 | do | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | Yes, . | Yes |
| 494 | do | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 495 | do | do. | . . . . . | About the same, . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 496 | do. | do. | . . . . . | do. do. . . | do . | No. . . . . | No. . . . . | . . . . . | 9 | No. | |
| 497 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 | No. | |
| 498 | do | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 499 | do | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 500 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 8 | Yes, . | No. |
| 501 | do. | do. | . . . . . | . . . . . | do. . | No. . . . . | No, . . . . . | . . . . . | 8 | Yes, . | Yes. |
| 502 | England, . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 503 | do | do. | Piece, . . | About 20 p. c. more, | do . | No machinery. . . . . | No. . . . . | . . . . . | 9 | No | |

* The use of iron, stone and terra cotta has displaced hod carriers

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn the most, working by the piece, hour or day? | If there is a difference state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 504 | Scotland, . . . | Bricklayer, | . . . . . | . . . . . | Yes, | No, . . . . . | No. . . . . | . . . . . | 8 & 9 | No. | |
| 505 | England, . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 506 | do . . . | do. | Piece, . . | About 6 p. c. more. | do. . | *Yes; hoisting machinery, | Yes; hod carriers, . | Lowered $1.20 per day. | 9 | Yes, . | Yes. |
| 507 | Scotland, . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 508 | Ireland, . . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | Yes. |
| 509 | United States, | do. | Piece, . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 8 | No. | |
| 510 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 511 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 512 | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 8 & 9 | No. | |
| 513 | do. | do. | Hour. . . | . . . . . | do. . | . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 514 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 | . . . . | |
| 515 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | Yes. |
| 516 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | . . . . | |
| 517 | do. | do. | Piece, . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | Yes. | |
| 518 | Turkey, . . . . | do. | Hour. . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 519 | Germany, . . . | do. | . . . . . | . . . . . | do. . | . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 520 | England, . . . | do. | . . . . . | . . . . . | do | No machinery. . . . . | No. . . . . | . . . . . | 8 & 9 | No. | |

* Displaced hod carriers.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 521 | Ireland, | do. | | | do. | No machinery, | No, | | 9 | No | |
| 522 | Scotland, | do. | Hour, | | do. | No machinery, | | | 9 | No. | |
| 523 | United States, | do. | | | do. | | | | 8 | No. | |
| 524 | do. | do. | | | do. | | | | 9 | No | |
| 525 | do | do. | | | do. | No, | | | 9 | No. | |
| 526 | do. | do | | | do. | No machinery, | No, | | 9 | No. | |
| 527 | do. | do. | Piece, | | do. | | Yes, | | 9 | No. | |
| 528 | Germany, | do. | Hour, | | do. | | | | 9 | Yes, | Yes. |
| 529 | United States, | do | | | do. | | | | 8 & 9 | No. | |
| 530 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 531 | do. | do. | | | do. | | | | 9 | No. | |
| 532 | do. | do. | Hour, | | do. | | | | 9 | Yes, | No. |
| 533 | England, | do. | Piece, | 50 per cent. more, | do. | No, | No, | | 9 | Yes, | No. |
| 534 | United States, | do. | | | do. | | | | 9 | No | |
| 535 | do. | do. | Piece, | | do. | No machinery | | | 9 | No. | |
| 536 | do. | do. | | | do. | | No, | | 9 | No. | |
| 537 | Ireland, | do. | | | do. | | | | 9 | No. | |
| 538 | England, | do. | | | do. | | | | 9 | No. | |
| 539 | United States, | do. | | | do. | | | | 9 | Yes, | No. |
| 540 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 541 | do. | do. | | | do. | | | | 9 | No. | |
| 542 | do. | do. | | | do. | No machinery, | | | 8 & 9 | No. | |
| 543 | do. | do. | | | do | No machinery, | | | 8 & 9 | No. | |
| 544 | do. | do. | | | do. | No machinery, | | | | No. | |
| 545 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 546 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 547 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 548 | do. | do. | | | do. | No. | No, | | 8 & 9 | No. | |
| 549 | do | do | | | do. | No. | No. | | | No. | |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 550 | United States, | Bricklayer, | . . . . . | . . . . . | Yes, . . | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 551 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 552 | do. | do. | Hour, . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | . . . . | |
| 553 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8½ | No. | |
| 554 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | . . . . | . . . . | |
| 555 | do. | do. | . . . . . | . . . . . | do. . | No machinery, . . . . . | No. . . . . | . . . . . | 8 & 9 | No. | |
| 556 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 557 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 558 | do. | do. | . . . . . | . . . . . | do. . | Yes; one half, . . . . . | Yes; 60 per cent., . | Lowered over one half, | 9 | No. | |
| 559 | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 10 | No. | |
| 560 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 | No. | |
| 561 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 562 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 563 | do. | do. | . . . . . | . . . . . | do. . | Yes; hod carriers, . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 564 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 565 | do. | do. | Piece. . . | About $200 more, . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 566 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 567 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 568 | do. | do. | | | do. | | | | | No. | |
| 569 | do. | do. | | | do. | | | | 9 | No. | |
| 570 | do. | do. | Hour, | | do. | | | | 9 | No. | |
| 571 | Scotland, | do. | Hour, | 12½ per cent. more, | do. | | | | 9 | No. | |
| 572 | Wales, | do. | | | do. | | | | 8 & 9 | | |
| 573 | England, | do. | | | do. | | No, | | 8 & 9 | No. | |
| 574 | do. | do. | | | do. | No machinery. | No, | | 8 & 9 | Yes, | No. |
| 575 | Denmark, | do. | | | do. | | | | 8 & 9 | No. | |
| 576 | Ireland, | do. | | | do. | | | | 8 & 9 | No | |
| 577 | Scotland. | do. | | | do. | No. | No, | | 8 & 9 | Yes, | No. |
| 578 | Ireland, | do. | | | do. | | | | 9 | No. | |
| 579 | England, | do. | | | do. | Yes; hod-carriers. 2.70 to 1.50, | | | 9 | No. | |
| 580 | do. | do. | | | do. | No machinery. | | | 9 | No. | |
| 581 | United States. | do. | | | do. | | | | 9 | | |
| 582 | do. | do. | | | do. | | | | 9 | | |
| 583 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 584 | do. | do | | | do. | | | | 8 & 9 | No. | |
| 585 | do. | do. | | | do. | | | | 9 | Yes, | No. |
| 586 | do. | do. | | | do. | | | | 9 & 9 | No. | |
| 587 | England, | do. | | | do. | | | | 8 & 9 | No. | |
| 588 | Germany, | do. | | | do, | No, | No, | | 9 | No. | |
| 589 | United States, | do. | | | do. | No, | No, | | 9 | No. | |
| 590 | do. | do. | | | do. | | | | 8 & 9 | Yes, | Yes. |
| 591 | do. | do. | | | do. | No. | No, | | 9 | No. | |
| 592 | England. | do. | | | do. | No, | No, | | 8 & 9 | No. | |
| 593 | United States, | do. | | | do. | | | | 8 & 9 | No. | |
| 594 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 595 | United States, | do. | | | do. | | | | 9 | Yes. | Yes. |

WORKMEN IN BUILDING TRADES—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 596 | England, | Bricklayer, | Hour, | | Yes, | | | | 9 | Yes, | No. |
| 597 | United States, | do. | | | do. | No machinery, | | | 8 & 9 | No. | |
| 598 | England, | do. | | | do. | No, | No, | | 9 | No. | |
| 599 | United States, | do. | | | do. | No, | No, | | 8 & 9 | No. | |
| 600 | do. | do. | | | do. | No, | No, | | 8 & 9 | | |
| 601 | do. | do. | | | do. | | | | 9 | No. | |
| 602 | do. | do. | | | do. | | | | 9 | No. | |
| 603 | do. | do. | | | do. | | No, | | 8 & 9 | Yes. | Yes. |
| 604 | do. | do. | | | do. | | | | 9 | No, | |
| 605 | do. | do. | | | do, | | | | 9 | No, | |
| 606 | do. | do. | | | do. | | | | 8 & 9 | No, | |
| 607 | do. | do. | Hour. | | do. | | | | 9 | No. | |
| 608 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 609 | do. | do. | | | do. | | | | 8 & 9 | Yes, | No. |
| 610 | do. | do. | Piece, | About 20 per ct. more | do. | | | | 8 & 9 | No. | |
| 611 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 612 | do. | do. | Hour, | | do. | No, | | | 9 | Yes, | No. |
| 613 | do. | do. | | | do. | | | | 9 | No. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 614 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 615 | do. | do. | Piece, . . | ..... | do. | No, ..... | No, ..... | ..... | 9 | No. | |
| 616 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 617 | do. | do. | ..... | ..... | do. | No, ..... | No, ..... | ..... | 8 | No. | |
| 618 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 619 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | | |
| 620 | do. | do. | ..... | ..... | do. | No machinery, ..... | ..... | ..... | 9 | No. | |
| 621 | do. | do. | ..... | ..... | do. | No machinery. ..... | ..... | ..... | 9 | No. | |
| 622 | do. | do. | ..... | ..... | do. | No, ..... | No, ..... | ..... | 8 & 9 | No. | |
| 623 | do. | do. | Piece, . . | ..... | do. | No machinery, ..... | ..... | ..... | 9 | No. | |
| 624 | do. | do. | ..... | ..... | do. | No machinery, ..... | ..... | ..... | 8 & 9 | No. | |
| 625 | do. | do. | ..... | ..... | do. | No, ..... | No, ..... | ..... | 8 | No. | |
| 626 | do. | do. | ..... | ..... | do. | ..... | Yes, ..... | ..... | 9 | No. | |
| 627 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 628 | do. | do. | ..... | ..... | do. | No, ..... | No, ..... | ..... | 9 | No. | |
| 629 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 630 | do. | do. | Piece, . . | ..... | .... | ..... | ..... | ..... | 9 | No. | |
| 631 | do. | do. | Piece, . . | ..... | do. | No, ..... | No, ..... | ..... | 8 | Yes. . | No. |
| 632 | England. . . . | do. | ..... | ..... | do. | No, ..... | ..... | ..... | 9 | No | |
| 633 | Ireland. . . . | do. | Piece, . . | About 20 per ct. more, | do. | ..... | ..... | ..... | 9 | No. | |
| 634 | do. . . . | do. | ..... | ..... | do. | No; ..... | No. ..... | ..... | 9 | No. | |
| 635 | do . . . | do. | ..... | Very little difference. | do. | ..... | ..... | ..... | 8 & 9 | Yes, . | No. |
| 636 | do . . . | do. | ..... | ..... | do. | Yes; hod carriers, .... | ..... | ..... | 8 & 9 | No. | |
| 637 | do. . . . | do. | ..... | ..... | do. | No, ..... | No. ..... | ..... | 9 | No. | |
| 638 | do. . . . | do. | ..... | ..... | do. | No. ..... | No, ..... | ..... | 9 | No. | |
| 639 | do. . . . | do. | Piece, . . | From 25 to 50 per cent. more. | do. | Yes; about five-eighths of the hod carriers. | Yes, ..... | Lowered hod carriers 40 per cent. | 9 | No. | |
| 640 | do. . . . | do. | ..... | ..... | do. | No machinery. ..... | ..... | ..... | 8 & 9 | No. | |
| 641 | do. . . . | do. | ..... | ..... | do. | No. ..... | ..... | ..... | 8 & 9 | | |
| 642 | do. . . . | do. | ..... | ..... | do. | No, ..... | No. ..... | ..... | 8 & 9 | No. | |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 643 | England, | Bricklayer, | | | Yes, | No machinery, | | | 8 & 9 | No. | |
| 644 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 645 | do. | do. | | | do. | No, | No, | | 9 | No. | |
| 646 | do. | do. | Piece, | About 25 per ct. more, | do. | No, | No, | | 8 & 9 | No. | |
| 647 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 648 | do. | do. | | | do. | | No, | | 9 | No. | |
| 649 | do. | do. | | | do. | | No, | | 9 | No. | |
| 650 | do. | do. | | | do. | | | | 8 & 9 | Yes, | No. |
| 651 | do. | do. | Hour, | | do. | No, | No, | | 8 & 9 | Yes, | No. |
| 652 | do. | do. | | | do. | No machinery, | | | 9 | No. | |
| 653 | do. | do. | Hour, | | do. | No. | No, | | 9 | No. | |
| 654 | Russia, | do. | Piece, | 10 per cent. more, | do. | | | | 9 | No. | |
| 655 | Germany, | do. | | | do. | No machinery, | | | 8 & 9 | No. | |
| 656 | do. | do. | | | do. | | | | 8 & 9 | No. | |
| 657 | do. | do. | | | do. | | | | 8 | No. | |
| 658 | Switzerland, | do. | | | do | | | | 9 | No. | |
| 659 | *France, | do. | | | do. | | | | 9 | No. | |
| 660 | Scotland, | do. | Hour, | 10 per cent. more. | do. | | | | 8 | No. | |

* Contractor.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 661 | Scotland. . . | do. | Piece, . . | 33⅓ per cent more. . | do. . | None, . . . . . | No, . . . . . | . . . . . | 9 | No | |
| 662 | United States, | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | Yes. . | No |
| 663 | do. | do. | Hour, . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | No . . . . . | . . . . . | 8 & 8 | No | |
| 665 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 666 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | Yes. . | Yes. |
| 667 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | Yes. . | Yes. |
| 668 | do. | do. | Piece. . . | 25 per cent. more. . | do. . | No, . . . . . | No. . . . . | . . . . . | 9 | No. | |
| 669 | do. | do. | . . . . . | . . . . . | do . | . . . . . | . . . . . | . . . . . | 8 | No. | |
| 670 | do. | do. | . . . . . | No. . . . . | do. . | No. . . . . | No. . . . . | . . . . . | 9 | Yes, . | Yes. |
| 671 | do. | do. | . . . . . | No price is set, . . . | do. . | Yes: hod carriers. . . . . | Yes; hod carriers, . | Lowered from 30 to 17½ cents an hour. | 8 & 9 | No. | |
| 672 | do. | do. | Piece. . . | . . . . . | do. . | do. do. . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 673 | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | . . . . . | . . . . . | 9 | No. | |
| 674 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 675 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 676 | do. | do. | . . . . . | . . . . . | do. | No. . . . . | No. . . . . | . . . . . | 9 | Yes. . | No. |
| 677 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 678 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 679 | do. | do. | . . . . . | . . . . . | do . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 680 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 681 | do. | do. | Piece. . . | . . . . . | do. . | No . . . . . | . . . . . | . . . . . | 9 | No | |
| 682 | do. | do. | . . . . . | . . . . . | do. . | No. . . . . | No. . . . . | . . . . . | 8 & 9 | No. | |
| 683 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 684 | do. | do. | Piece, . . | 20 per cent. more, . | do. . | No, . . . . . | . . . . . | . . . . . | 9 | No. | |
| 685 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 686 | do | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 | No. | |
| 687 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 688 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No | |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages. | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 689 | United States, | Bricklayer, | ..... | ..... | Yes, | No machinery, | ..... | ..... | 8 & 9 | No. | |
| 690 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 691 | do. | do. | ..... | ..... | do. | No machinery, | ..... | ..... | 8 & 9 | No. | |
| 692 | do. | do. | ..... | ..... | do. | No, | No, | ..... | 9 | Yes, | No. |
| 693 | do. | do. | ..... | ..... | do. | No, | No, | ..... | 8 | No. | |
| 694 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 695 | do. | do. | Piece, | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 696 | do. | do. | ..... | ..... | do. | No, | No, | ..... | 8 | No. | |
| 697 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 698 | do. | do. | ..... | ..... | do. | No, | No, | ..... | 9 | No. | |
| 699 | do. | do. | ..... | ..... | do. | No, | ..... | ..... | 8 & 9 | No. | |
| 700 | do. | do. | Hour, | ..... | do. | No, | No, | ..... | 8 | No. | |
| 701 | do. | do. | ..... | ..... | do. | No machinery, | ..... | ..... | 8 & 9 | No. | |
| 702 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 703 | do. | do. | ..... | ..... | do. | Yes; hod carriers, | Yes; hod carriers, | Lowered 33 per cent. | 9 | No. | |
| 704 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 705 | do. | do. | ..... | ..... | do. | No, | No, | ..... | 10 | No. | |
| 706 | do, | do. | ..... | ..... | do. | No, | ..... | ..... | 8 & 9 | No. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 707 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 708 | do. | do. | Hour. . . | ..... | do. | No. ..... | No, ..... | ..... | 8 | No. | |
| 709 | do. | do. | ..... | ..... | do. | No. ..... | ..... | ..... | 8½ | Yes. . | Yes. |
| 710 | do. | do. | Hour. . . | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 711 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 712 | do. | do. | ..... | ..... | do. | No. ..... | No. ..... | ..... | 8 & 9 | No. | |
| 713 | do. | do. | ..... | ..... | do. | Yes: hod carriers. . . . . | No. ..... | ..... | 9 | Yes. . | No. |
| 714 | do. | do. | ..... | ..... | do. | ..... | No. ..... | ..... | 9 | No. | |
| 715 | do. | do. | Hour, . . | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 716 | do. | do. | Piece. . . | 12 per cent. more. . . | do. | No. ..... | Yes. ..... | Lowered ..... | 8 | No. | |
| 717 | do. | do. | ..... | ..... | do | ..... | ..... | ..... | 9 | No. | |
| 718 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 719 | do. | do. | ..... | ..... | do. | No. ..... | No. ..... | ..... | 8 & 9 | No. | |
| 720 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | | |
| 721 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | Yes. | Yes. |
| 722 | do. | do. | Hour. . . | ..... | do. | No. ..... | No. ..... | ..... | 9 | No. | |
| 723 | do. | do. | Hour. . . | ..... | do. | ..... | ..... | ..... | 8 & 9 | Yes. | |
| 724 | do. | do. | ..... | ..... | do. | No machinery. . . . . | ..... | ..... | 9 | No. | |
| 725 | do. | do. | ..... | ..... | do. | No. ..... | No. ..... | ..... | 8 & 9 | No. | |
| 726 | do. | do. | Piece. . . | ..... | do. | No machinery. . . . . | ..... | ..... | 9 | No. | |
| 727 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No | |
| 728 | do. | do. | Piece. . . | 100 per cent. more. . | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 729 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| *730 | do. | do. | Piece. . . | Five per cent. more. | do | No, ..... | No. ..... | ..... | 9 | Yes. | No. |
| 731 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 732 | do. | do.. | ..... | ..... | do. | ..... | ..... | ..... | . . . . | Yes. . | No. |
| 733 | do. | do. | Piece. . . | ..... | do. | No. ..... | No. ..... | ..... | 9 | No. | |
| 734 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | Yes. . | No. |

* Contractor.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workman, if so to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 735 | United States, | Bricklayer, | . . . . . | . . . . . | Yes. | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 736 | do. | do. | . . . . . | . . . . . | do. | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 737 | do. | do. | Hour, . . | . . . . . | do. | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 738 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 739 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 740 | do. | do. | Hour, . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 741 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 8 & 9 | Yes, . | Yes. |
| 742 | do. | do. | Piece, . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 743 | do. | do. | Piece, . . | . . . . . | do. | No machinery, . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 744 | do. | do. | . . . . . | . . . . . | do. | No, . . . . . | No. . . . . | . . . . . | 9 | No. | |
| 745 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | . . . . | . . . . | |
| 746 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 747 | do. | do. | . . . . . | No difference, . . . | do. | No machinery, . . . . . | . . . . . | . . . . . | 9 | No. | |
| 748 | do. | do. | Piece. . . | . . . . . | do. | No, . . . . . | . . . . . | . . . . . | 9 | Yes, . | No. |
| 749 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 750 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 751 | do. | do. | . . . . . | . . . . . | do. | No, . . . . . | No. . . . . | . . . . . | 8 & 9 | Yes, . | No. |
| 752 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 9 | No. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 753 | do. | do. | ..... | ..... | do. | No, | ..... | ..... | 8 & 9 | No. | |
| 754 | do. | do. | ..... | ..... | do. | No machinery. | ..... | ..... | 8 & 9 | No. | |
| 755 | do. | do. | Hour, | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 756 | do. | do. | ..... | ..... | do. | No machinery, | ..... | ..... | 8 & 9 | No. | |
| 757 | do. | do. | ..... | ..... | do. | Yes; hod carriers. | Yes; hod carriers, | Lowered from $2.70 to $1.50. | 9 | No. | |
| 758 | do. | do. | Hour. | ..... | do. | ..... | No. | ..... | 9 | No. | |
| 759 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 & 9 | No. | |
| 760 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | .... | No. | |
| 761 | do. | do. | Hour, | ..... | do. | No machinery. | ..... | ..... | 8 & 9 | No. | |
| 762 | do. | do. | ..... | ..... | do. | No machinery, | ..... | ..... | 8 & 9 | No. | |
| 763 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 764 | do. | do. | ..... | ..... | do. | No, | No, | ..... | 9 | No. | |
| 765 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | Yes. | Yes. |
| 766 | England. | do. | Piece. | $5 00 per week more. | do. | Yes; hod carriers. | Yes, | From $2.70 per day to $1.50 per day. | 9 | Yes, | No. |

## WORKMEN IN BUILDING TRADES.—PITTSBURG—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Ireland, | Bricklayer, | 3 years, | 33⅓ cts. | 44 cts | 50 cts. | 50 cts | 45 cts. | 4 months, | 6 months, | 5 months, | 8 months, | 3½ months |
| 2 | United States, | do. | 3 | 33 | 44 | 44 | 44 | 44 | 4 | 9 | 8½ | 8 | 7½ |
| 3 | do. | do. | 4 | 44 4-9 | 45 | 45 | 45 | 45 | 4 | 4 | 3 | 4 | 4 |
| 4 | do. | do. | 3 | 44 | 44 | 44 | 44 | 50 | 5 | 6 | 8 | 6 | 1 |
| 5 | do. | do. | 3 | 33⅓ | 40 | 50 | 50 | 44 | 4 | 4½ | 2 | ..... | 1 |
| 6 | do. | do. | 3 | 25 | 40 | 44 | 44 | 45 | 5 | 7 | 10 | 5 | 4 |
| 7 | do. | do. | 3 | 33 | 44 | 50 | 50 | 50 | 3 | 4 | 3 | 1 | 2 |
| 8 | do. | do. | 3 | 33 | 44 | 50 | 50 | 50 | 4½ | 8 | 9 | 4 | 3 |
| 9 | do. | do. | 1 | 33 | 44 | 50 | 50 | 50 | 6¾ | 8 | 4 | 2 | 1 |
| 10 | do. | do. | 3 | 33 | 50 | 50 | 50 | 50 | 6 | 10 | 2 | 2 | 2 |
| 11 | do | do. | 5 | 33 | 44 | 44 | 45 | 50 | 5 | 3 | 1 | 1 | 1 |
| 12 | do. | do. | 5 | 44 | ..... | ..... | 56 | 56 | 5 | 0 | 0 | 2 | ..... |
| 13 | do. | do. | 3 | 33⅓ | 39 | 50 | 50 | 44½ | 4½ | 9 | 8 | 4 | 3 |
| 14 | do. | do. | 3 | 33 | 44 | 44 | 50 | 50 | 4 | 5 | 3 | 3 | 3½ |
| 15 | do. | do. | 3 | 33⅓ | 45 | 45 | 50 | 45 | 5 | 11 | 9 | 5 | 5 |
| 16 | do. | do. | 3 | 33⅓ | 39 | 50 | 50 | 44 | 4½ | 9 | 8 | 4 | 3 |
| 17 | do. | do. | 3 | 33⅓ | 44 | 50 | 50 | 44 | 4 | 5 | ½ | 5 | 2 |
| 18 | do. | do. | 3 | 35 | 44 | 50 | 50 | 45 50 | 3 | 4 | 2 | 2 | 3 |
| 19 | do | do. | 3 | 33⅓ | 44½ | 44½ | 44½ | 44½ | 2 | | 5 | 3 | 3 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | do. | do. | 4 | 45 | 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 21 | England. | do. | 4 | 33 | 44 | 44 | 50 | 50 | 3 | 3 | 3 | 3½ | 3 |
| 22 | do. | do. | 3 | 28-33 | 44 | 44 | 44 | 44 | 5½ | 1 | 6 | 3 | 2 |
| 23 | do. | do. | 3 | 33 | 44 | 48 | 44 | 44 | 6 | 6 | 5 | 4 | 4 |
| 24 | do. | do | 5 | 33 | 40 | 50 | 50 | 44½ | 3 | 5 | 6 | 3½ | 4 |
| 25 | Germany. | do. | 3 | 28 | ..... | 44 | 50 | 44 | 3½ | 12 | 4 | 4 | 4 |

WORKMEN IN BUILDING TRADES.—PITTSBURG—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States? If not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Ireland. | Bricklayer, | Weekly, | $132 00 | $504 00 | $675 00 | 596 00 | $841 50 | United States. | |
| 2 | United States, | do. | do. | 141 00 | 264 00 | 308 00 | 348 00 | 392 00 | do. | |
| 3 | do. | do. | Semi-monthly, | 200 00 | 640 00 | 720 00 | 650 00 | 680 00 | do. | |
| 4 | do. | do. | do. | 88 00 | 480 00 | 352 00 | 356 00 | 1089 00 | do. | No. |
| 5 | do. | do. | do. | 120 00 | 162 00 | 540 00 | 810 00 | 600 00 | do. | No. |
| 6 | do. | do. | do. | 49 50 | 396 00 | 176 00 | 616 00 | 792 00 | do. | No. |
| 7 | do. | do. | do. | 200 00 | 600 00 | 875 00 | 1000 00 | 850 00 | do. | No. |
| 8 | do. | do. | Weekly, | 99 00 | 352 00 | 297 00 | 792 00 | 846 00 | do. | |
| 9 | do. | do. | Semi-monthly, | 18 00 | 396 00 | 792 00 | 990 00 | 1089 00 | do. | |
| 10 | do. | do. | do. | 0 00 | 70 00 | 1035 00 | 1039 50 | 1200 00 | do. | No. |
| 11 | do. | do. | Weekly, | 66 00 | 720 00 | 870 00 | 880 00 | 990 00 | do. | No. |
| 12 | do. | do. | Semi-monthly. | 120 00 | *1500 00 | *2000 00 | 1000 00 | 1160 00 | do. | No. |
| 13 | do. | do. | do. | 99 00 | 221 00 | 392 00 | 720 00 | 724 00 | do. | No. |
| 14 | do. | do. | Weekly. | 122 00 | 750 00 | 650 00 | 641 00 | 605 00 | do. | No. |
| 15 | do. | do. | do. | ..... | 35 00 | 225 00 | 600 00 | 600 00 | do. | No. |
| 16 | do. | do. | Semi-monthly, | 99 00 | 221 00 | 396 00 | 720 00 | 724 00 | do. | No. |
| 17 | do. | do. | Weekly, | 150 00 | 640 00 | 701 65 | 765 50 | 880 00 | do. | |

*Contract.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 18 | do. | do. | Semi-monthly, | 225 00 | 600 00 | 750 00 | 750 00 | 600 00 | do. | No. |
| 19 | do. | do | Weekly, | 264 00 | 704 00 | 616 00 | 792 00 | 792 00 | do | |
| 20 | do | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No |
| 21 | England. | do. | do. | 198 00 | 704 00 | 740 00 | 796 00 | 800 00 | do. | |
| 22 | do. | do | Semi-monthly, | 33 00 | 880 00 | 720 00 | 504 00 | 880 00 | do. | |
| 23 | do. | do. | do. | 0 00 | 504 00 | 595 00 | 640 00 | 672 00 | do. | |
| 24 | do | do. | do. | 198 00 | 554 40 | 594 00 | 851 50 | 704 00 | England, | No. |
| 25 | Germany, | do | do | 180 00 | ..... | 768 00 | 865 00 | 780 00 | Germany, | No. |

WORKMEN IN BUILDING TRADES.—PITTSBURG—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much? | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen. If so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Ireland, | Bricklayer, | | | Yes, | | | | | No, | |
| 2 | United States, | do, | | | do | | | | | No, | |
| 3 | do, | do, | | | do | | | | | No, | |
| 4 | do, | do, | | | do, | | | | | No, | |
| 5 | do, | do, | Hour, | | do, | No machinery, | | | 9 | No, | |
| 6 | do, | do, | | | do, | No, | | | | No, | |
| 7 | do, | do, | Hour, | | do, | No machinery, | | | 9 | No, | |
| 8 | do, | do, | | | do, | No, | | | | No, | |
| 9 | do, | do, | | | do, | | | | | No | |
| 10 | do, | do, | | | do | No, | | | | No, | |
| 11 | do, | do, | | | do, | No machinery, | | | 9 | No, | |
| 12 | do, | do, | Piece, | 50 per cent. more, | do, | No, | | | | No, | |
| 13 | do, | do, | | | do, | | | | 9 | No, | |
| 14 | do, | do, | | | do, | | | | | No, | |
| 15 | do, | do, | | | do | No machinery, | | | 9 | No, | |
| 16 | do, | do, | | | do, | No, | | | | No, | |
| 17 | do, | do, | | | do, | | | | 9 | Yes, | Yes, |
| 18 | do, | do, | | | do | | | | 9 | No, | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | do. | ..... | ..... | do | ..... | ..... | ..... | 9 | No. | |
| 20 | do. | do | ..... | ..... | do | ..... | ..... | ..... | 8 & 9 | No. | |
| 21 | England, . . . | do. | ..... | ..... | do. | ..... | ..... | ..... | .... | No. | |
| 22 | do. . . . | do. | ..... | ..... | do. | ..... | ..... | ..... | .... | No | |
| 23 | do. . . . | do. | ..... | ..... | do. | ..... | ..... | ..... | .... | No. | |
| 24 | do. . . . | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 25 | Germany. . . . | do. | ..... | ..... | do. | No machinery. . . . . | ..... | ..... | 9 | Yes. | No |

## WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Plasterer, | 4 years. | 45 cts. | cts. | cts. | cts. | cts. | months. | months. | months. | months. | months. |
| 2 | do. | do. | 3 | 40 | 45 | 40 | 33⅓ | ..... | ..... | ..... | ..... | ..... | ..... |
| 3 | do. | do. | 4 | 40 | 40 | 39 | 39 | 39 | 2 | 1½ | 1½ | ..... | ..... |
| 4 | Ireland, | do. | 5 | 40 | 40 | 39 | 39 | ..... | 5 | 9 | 9 | ..... | ..... |
| 5 | United States, | do. | 4 | 40 | 40-45 | 39 | 39 | 39 | 2 | 2 | 2 | 2 | 2 |
| 6 | do. | do. | 4 | 40 | 40 | 40 | 40 | 40 | 4 | 7 | 7 | 7 | 7 |
| 7 | do. | do. | 3⅝ | 40 | 45 | 44 | 44 | 44 | 3 | ..... | ..... | ..... | ..... |
| 8 | England, | do. | 4 | 40 | 40 | 39 | 39 | ..... | ..... | ..... | ..... | ..... | ..... |
| 9 | Germany, | do. | 3 | 40 | 45 | 40 | 40 | 41 | 3 | 5½ | 6 | 5½ | 5¼ |
| 10 | Ireland, | do. | 3 | 40 | 40 | 40 | 40 | 40 | ..... | ..... | ..... | 3 | 3 |
| 11 | United States, | do. | 4 | 25-40 | 22 | ..... | ..... | ..... | 1 | 2 | 2 | 3 | 1 |
| 12 | do. | do. | 3 | 40 | 40-45 | 40 | 40 | 40 | 4 | 4½ | 4 | 3 | 4 |
| 13 | Ireland, | do. | 4 | 44 | 44 | 44 | 44 | 44 | 3 | 6 | 6 | 6 | 6 |
| 14 | United States, | do. | 3 | 40-45 | 40 | 39 | 39 | 39 | 3 | 2 | 3 | 2 | 2 |
| 15 | England, | do. | 5 | 40 | 40 | 40 | 40 | 40 | 3 | 3 | 3 | 3 | 3 |
| 16 | do. | do. | 7 | 40 | 40 | 39½ | 39½ | 39½ | 2 | 2 | 2 | 2 | 2 |
| 17 | United States | do. | 4 | 40 | 45 | 39 | 39 | 39 | 3 | 4 | 2 | 3 | 4 |
| 18 | England, | do. | 4 | 40 | ..... | ..... | ..... | ..... | 2 | 8 | 8 | 2 | ..... |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | United States. | do. | 3 | 40 | 45 | 40 | 40 | ..... | 4½ | 3 | 4 | ..... | ..... |
| 20 | do. | do. | 4 | 40 | 44 | 40 | 37½ | 34 | 6 | 1 | 2 | 2 | 3 |
| 21 | do. | do. | 4 | 25 | 31 | 31 | 31 | 31 | 1 | 1 | ..... | ..... | ..... |
| 22 | do. | do. | 3 | 45 | 40 | 40 | 40 | 40 | ..... | 3 | 4 | 1 | ..... |
| 23 | do. | do. | 3 | 40 | 45 | 40 | 21 | 19 | 6 | 2 | 2 | ..... | ..... |
| 24 | England, | do | 7 | 40 | 45 | 44 | 44 | 44 | 3 | ..... | ..... | ..... | ..... |
| 25 | do. | do. | 4 | 40 | 40 | 40 | 39 | 39 | 4 | 3 | 3 | 2 | 2 |
| 26 | United States, | do. | 4 | 40 | 45 | 38 | 38 | 30 | 1 | 2 | 3 | 3 | 2 |
| 27 | do. | do. | 4 | 40 | ..... | ..... | ..... | ..... | 3 | ..... | ..... | ..... | ..... |
| 28 | do. | do. | 4 | 40 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 29 | Ireland, | do. | 5 | 40 | ..... | ..... | 39 | 39 | ..... | ..... | ..... | ..... | ..... |
| 30 | do. | do. | 3 | 37½ | 44 | 40 | 44 | 40 | 5 | 5 | 4 | 3 | 3 |
| 31 | United States. | do. | 4 | 40 | 45 | 40 | 40 | 45 | ..... | ..... | ..... | ..... | ..... |
| 32 | do. | do. | 3 | 40 | 40 | 20 | 20 | 20 | 3 | ..... | ..... | ..... | ..... |
| 33 | do. | do. | 4 | 40 | 45 | 44 | 44 | 50 | ..... | 2 | 2 | 2 | 2 |
| 34 | do. | do. | 4 | 40 | 45 | 40 | 44 | 44 | 5 | 4 | 4 | 4 | 4 |
| 35 | do. | do. | 3½ | 40 | 45 | 40 | 40 | 39 | ..... | ..... | ..... | ..... | ..... |
| 36 | do. | do. | 3 | 40 | 45 | 39 | 39 | 39 | 1 | 2 | 3 | 2 | ..... |
| 37 | Ireland. | do. | 4 | 40 | 45 | 45 | 42 | 45 | 3 | 3 | 3 | ..... | ..... |
| 38 | United States, | do. | 3 | 40 & 45 | ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... |
| 39 | do. | do | 3 | 40 | 45 | 44 | 44 | 44 | ..... | 4 | 4 | 4 | 4 |
| 40 | Ireland. | do. | 4 | 40 | 45 | 44 | 44 | 44 | 6 | 11 | 8 | 5 | 6 |
| 41 | United States. | do. | 4 | 40 | 40 & 45 | ..... | ..... | ..... | 2 | 3 | 3 | 3 | 3 |
| 42 | do. | do. | 4 | ..... | 44 | 44½ | 44 | ..... | 2 | 3 | 3 | 3 | 3 |
| 43 | do. | do. | 4 | 40 | 45 | 39½ | 39½ | ..... | 2 | 1 | 2 | 2 | ..... |
| 44 | do. | do. | 4 | 40 | 40 | 40 | 40 | ..... | 1¼ | 5 | 3½ | 3 | ..... |
| 45 | do. | do. | 4½ | 40 | 40 | 40 | 40 | 50 | 2 | ..... | ..... | ..... | ..... |
| 46 | do. | do | 4½ | 40 | 40 & 42½ | 38 & 40 | 38 | 38 | 2½ | 5 | 2 | 4 | 4 |
| 47 | do. | do | 7 | 40 | 40 | 40 | 40 | 40 | 4 | 3 | 4 | 3 | 3 |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 48 | United States. | Plasterer. | 3 years. | 40 cts. | 45 cts. | 40 cts. | 38 cts. | 38 cts. | 3 months. | 2 months. | 2 months. | ½ months. | months. |
| 49 | do. | do. | 4⅝ | 40 | 45 | 44 | 44 | ..... | 5 | 6 | 7 | 4 | ..... |
| 50 | do. | do. | 4 | 33 | 40 | 33 | 33 | 33 | 3 | 3 | 3 | 3 | 3 |
| 51 | do. | do. | 5 | 40 | 45 | 40 | 44 | 44 | ..... | 6 | ..... | ..... | ..... |
| 52 | do. | do. | 4 | 40 | 35 | 35 | 35 | 30 | 4 | ..... | ..... | 4 | 4 |
| 53 | do. | do. | 3 | 40 | 40 & 45 | 39 | 39 | 39 | 3 | 2 | 2⅝ | 2 | 2 |
| 54 | do. | do. | 3 | 40 | 45 | 39 | 39 | 39 | 2 | 3 | 3 | 3 | 4 |
| 55 | Ireland. | do. | 4 | 40 | 45 | 45 | 45 | ..... | 3 | ..... | ..... | ..... | ..... |
| 56 | do. | do. | 5 | 45 | 45 | 40 | 39½ | 39½ | ..... | ..... | ..... | ..... | ..... |
| 57 | do. | do. | 4 | 40 | 40 | 39 | ..... | ..... | 3 | ..... | ..... | ..... | ..... |
| 58 | do. | do. | 3 | 40 | 45 | 33 | 39 | 39 | 3 | 3 | 3 | 3 | 3 |
| 59 | do. | do. | 5 | ..... | ..... | 40 | 40 | 40 | ..... | ..... | ..... | ..... | ..... |
| 60 | do. | do. | 5 | 40 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 61 | Wales. | do. | 4 | 37½ | 45 | 44 | 44 | 44 | 5 | 3 | 2 | 3 | 2 |
| 62 | England. | do. | 3 | 40 | 45 | 40 | 40 | 40 | 5 | ..... | ..... | ..... | ..... |
| 63 | Ireland. | do. | 5 | 40 | 40 | 40 | 40 | 40 | 1 | ..... | ..... | ..... | ..... |
| 64 | do. | do. | 7 | 40 | 40 | 40 | 40 | 40 | 4 | ..... | ..... | ..... | ..... |
| 65 | do. | do. | 5 | 40 | 40 | 39 | 39 | 39 | 3 | 3 | 3 | 3 | 3 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66 | England. | do. | 3 | 40 | 40 | 40 | 40 | 40 | ..... | ..... | ..... | ..... | ..... | ..... |
| 67 | do. | do. | 4 | 25 & 40 | 40 | 50 | 50 | 50 | 2 | ..... | ..... | ..... | ..... | ..... |
| 68 | do. | do. | 6 | 40 | 45 | 44 | 44 | 44 | 5½ | 3 | ..... | 3 | 1 |
| 69 | Germany. | do. | 5 | 40 | 40 | 40 | 40 | 40 | 3 | 3 | 3 | 3 | 3 |
| 70 | United States. | do. | 4 | 40 | 40 & 45 | 40 | 39 | 39 | ..... | ..... | ..... | ..... | ..... |
| 71 | do. | do. | 3 | 40 | 40 | 20 | 20 | 20 | ..... | ..... | ..... | ..... | ..... |
| 72 | do. | do. | 3 | 40 | 40 & 45 | 40 | 39 | 39 | ..... | ..... | ..... | ..... | ..... |
| 73 | do. | do. | 4 | 40 | 40 & 45 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 74 | do. | do. | 4 | 40 | 45 | 40 | 40 | ..... | 5½ | 3 | 2 | 2½ | ..... |
| 75 | do. | do. | 3 | 40 & 45 | 40 | 40 | 40 | 40 | 3 | 5 | 5 | 5 | 5 |
| 76 | do. | do. | 4 | 40 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 3 | 3 |
| 77 | do. | do. | 5½ | 40 & 45 | 40 | 39 | 39 | 39 | 2 | 4 | 4 | 3 | 4 |
| 78 | do. | do. | 3 | 40 | 44 | 44 | 44 | 44 | ..... | ..... | ..... | ..... | ..... |
| 79 | do. | do. | 4 | 40 | 45 | 40 | 44 | 44 | ..... | ..... | ..... | ..... | 3 |
| 80 | do. | do. | 5 | 40 | 45 | 37½ | 37½ | 37½ | 2 | 2 | 2 | 2 | 2 |
| 81 | do. | do. | 4 | 40 | 40 | 40 | 35 | 35 | 3 | ..... | ..... | ..... | ..... |
| 82 | do. | do. | 4 | 40 | 45 | ..... | ..... | ..... | 4 | ..... | ..... | ..... | ..... |
| 83 | do. | do. | 4 | 40 | ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... |
| 84 | do. | do. | 4 | 40 | 45 | ..... | ..... | ..... | 6 | ..... | ..... | ..... | ..... |
| 85 | do. | do. | 4 | 40 | 45 | 40 | 40 | 44 | ..... | ..... | ..... | ..... | ..... |
| 86 | do. | do. | 4* | 20 & 40 | 45 | 40 | 25 & 30 | 20 | ..... | ..... | ..... | ..... | ..... |
| 87 | do. | do. | 4 | 40 | 40 | 40 | 35 | 35 | 2 | ..... | ..... | ..... | ..... |
| 88 | do. | do. | 4 | 40 | 45 | 45 | 45 | 38 | 5 | ..... | ..... | ..... | ..... |
| 89 | do. | do. | 4 | 40 | ..... | ..... | ..... | ..... | 2 | 4 | 4 | 4 | 4 |
| 90 | do. | do. | 4 | 40 | 45 | 40 | 39 | 39 | 3 | ..... | 2 | 1 | 1 |
| 91 | do | do. | 4½ | 40 | ..... | ..... | ..... | ..... | 2 | 4 | 4 | 4 | 4 |
| 92 | do. | do. | 4 | 31 | 45 | 44 | 44 | 44 | 6 | 3 | 3 | 3 | 3 |
| 93 | do. | do. | 3 | 40 | 45 | 40 | 40 | 39 | 1 | ..... | ..... | ..... | ..... |

* Contractor.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born, | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 94 | United States. . | Plasterer, . . | 4 years. . . . | 40 cts. . . | 40 cts. . . | 40 cts. . . | 40 cts. . . | 40 cts. . . | months, . . | months. | months. | months. | months. |
| 95 | do. . | do. . . | 4 . . . | 45 . . | 40 . . | 38 . . | 33 . . | 33 . . | . . . . . | 3 | 2 | . . . . . | . . . . . |
| 96 | do. . | do. . . | 3 . . . | 40 . . | 45 . . | . . . . . | . . . . . | . . . . . | 5½ . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 97 | do. . | do. . . | 3 . . . | 25 & 40 . . | 40 & 45 . . | 37 & 40 . . | 37 & 41 . . | 37 & 44 . . | 2 . . | 4 | 4 | 2 | 3 |
| 98 | do. . | do. . . | 4 . . . | 40 . . | 45 . . | 40 . . | 37½ . . | 37½ . . | . . . . . | 3 | 4 | 2 | . . . . . |
| 99 | do. . | do. . . | 4 . . . | 28 . | . . . . . | . . . . . | . . . . . | . . . . . | 3 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 100 | do. . | do. . . | 3 . . . | 40 . . | 40 . . | 40 . . | 40 . . | 45 . . | . . . . . | 1 | 1 | 1 | 1 |
| 101 | do. . | do. . . | 4 . . . | 40 . . | 40 . . | 40 . . | 39 . . | 39 . . | 5 . . | 6 | 4 | 5 | 6 |
| 102 | do. . | do. . . | 4 . . . | 40 . . | 40 & 45 . . | 40 . . | 39 . . | 39 . . | 2½ . . | 4 | 4 | 4 | . . . . . |
| 103 | do. . | do. . . | 4 . . . | 40 . . | 40 . | 40 . . | 44 . . | 44 . . | 4 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 104 | do. . | do. . . | 4 . . . | 40 . . | 45 . . | 44 . . | 44 . . | 44 . . | . . . . . | 3 | 3 | 3 | 3 |
| 105 | do. . | do. . . | 3½ . . . | 40 . . | 40 . . | 40 . . | 39 . . | 39 . . | 1 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 106 | do. . | do. . . | 4 . . . | 40 . . | 40 . . | 40 . . | 44 . . | 44 . . | 3 . . | 5 | 5 | 5 | 5 |
| 107 | Wales. . . . . | do. . . | 7 . . . | 40 . . | 44 . . | 44 . . | 44 . . | 44 . . | 5 . . | 4 | 4 | 3 | 1 |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years 1893 | 1892 | 1891 | 1890 | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Plasterer. | Weekly, | $350 00 | | | | | United States, | No. |
| 2 | do. | do | do. | | | | | | do. | No. |
| 3 | do. | do. | do. | 325 00 | $800 00 | $800 00 | $800 00 | $800 00 | do. | No. |
| 4 | Ireland, | do. | do. | 12 00 | 36 00 | 36 00 | 36 00 | 36 00 | do. | No. |
| 5 | United States. | do. | do. | 395 40 | 919 00 | 778 00 | 684 09 | 722 91 | do | No. |
| 6 | do. | do. | do. | 153 60 | 384 00 | 384 00 | 384 00 | 384 00 | do | No. |
| 7 | do. | do. | do. | | | | | | do. | No. |
| 8 | England. | do. | do. | | | | | | do. | No |
| 9 | Germany. | do | do. | | | | | | do. | No. |
| 10 | Ireland, | do. | do. | 499 20 | 998 40 | 998 40 | 632 80 | 632 80 | do. | No. |
| 11 | United States. | do. | do. | 40 00 | | | | | do. | No. |
| 12 | do. | do. | do. | | | | | | do. | No, |
| 13 | Ireland. | do. | do. | 63 00 | | | | | do. | No. |
| 14 | United States. | do. | do. | 400 00 | 900 00 | 778 00 | 700 00 | 600 00 | do. | No. |
| 15 | England. | do | do. | | | | | | England, | No. |
| 16 | do. | do. | do. | | | | | | do | No. |
| 17 | United States. | do. | do. | | | | | | United States, | No. |
| 18 | England. | do. | do. | 300 00 | | | | | England, | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 19 | United States. | Plasterer, | Weekly, | $72 00 | $160 64 | ..... | ..... | ..... | United States, | No. |
| 20 | do. | do. | do. | ..... | 300 00 | $350 00 | $300 00 | $350 00 | do. | No. |
| 21 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | |
| 22 | do. | do. | do. | ..... | 748 80 | 672 00 | 1,036 80 | ..... | do. | No. |
| 23 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 24 | England. | do. | do. | ..... | ..... | ..... | ..... | ..... | England, | No. |
| 25 | do. | do. | do. | 153 60 | 725 00 | 700 00 | 800 00 | 700 00 | United States. | No. |
| 26 | United States, | do. | do. | 150 00 | 340 00 | 250 00 | 250 00 | 275 00 | do. | No. |
| 27 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | Sometimes. |
| 28 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 29 | Ireland. | do. | do. | ..... | ..... | ..... | ..... | ..... | Ireland, | No. |
| 30 | do. | do. | do. | 76 00 | ..... | ..... | ..... | ..... | United States. | Yes. |
| 31 | United States, | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 32 | do. | do. | do. | 176 00 | 174 00 | 190 00 | 200 00 | 100 00 | do. | No. |
| 33 | do. | do. | do. | 468 80 | 900 00 | 900 00 | 900 00 | 900 00 | do. | No. |
| 34 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 35 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 36 | do. | do. | do. | 300 00 | 700 00 | 585 00 | 600 00 | 600 00 | do | No. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 37 | Ireland. . . . . | do. . . . . | do. . . . . | 200 37 | 100 47 | 200 07 | 100 02 | 300 17 | do. . . . . | No. |
| 38 | United States, . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 39 | do. . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 40 | Ireland, . . . . . | do. . . . . | do. . . . . | . . . . . | 86 40 | 336 00 | 588 00 | 504 00 | do . . . . . | No. |
| 41 | United States. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 42 | do. . . . . | do. . . . . | do. . . . . | 250 00 | 750 00 | 750 00 | 750 00 | 750 00 | do. . . . . | No. |
| 43 | do. . . . . | do. . . . . | do. . . . . | 307 20 | 432 00 | 326 00 | 275 00 | . . . . . | do. . . . . | No. |
| 44 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 45 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 46 | do. . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 47 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 48 | do. . . . . | do. . . . . | do. . . . . | 240 00 | 280 00 | 250 00 | 260 00 | . . . . . | do. . . . . | No. |
| 49 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 50 | do. . . . . | do. . . . . | do. . . . . | 312 00 | 624 00 | 624 00 | 624 00 | . . . . . | do. . . . . | No. |
| 51 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 52 | do. . . . . | do. . . . . | do. . . . . | 153 60 | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 53 | do. . . . . | do. . . . . | do. . . . . | 243 75 | 316 10 | 260 00 | 333 78 | 352 56 | do. . . . . | No |
| 54 | do. . . . . | do. . . . . | do. . . . . | 300 00 | 537 60 | 614 40 | . . . . . | . . . . . | do. . . . . | No. |
| 55 | Ireland, . . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 56 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | England, . . . . . | No. |
| 57 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | United States. . . . . | No. |
| 58 | do. . . . . | do. . . . . | do. . . . . | 200 00 | 175 00 | 200 00 | 250 00 | 250 00 | do. . . . . | No. |
| 59 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | Ireland, . . . . . | No. |
| 60 | do. . . . . | do. . . . . | do. . . . . | 240 00 | . . . . . | . . . . . | . . . . . | . . . . . | United States. . . . . | No. |
| 61 | Wales. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | Wales. . . . . | No. |
| 62 | England. . . . . | do. . . . . | do. . . . . | 38 40 | . . . . . | . . . . . | . . . . . | . . . . . | United States, . . . . . | No. |
| 63 | Ireland. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | Ireland, . . . . . | No. |
| 64 | do. . . . . | do. . . . . | do. . . . . | 155 00 | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | Sometimes. |
| 65 | do. . . . . | do. . . . . | do. . . . . | 150 00 | 400 00 | 400 00 | 400 00 | 400 00 | do . . . . . | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 66 | England. | Plasterer. | Weekly, | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 67 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | England. | No. |
| 68 | do. | do. | do. | $38 40 | ..... | ..... | ..... | ..... | do. | No. |
| 69 | Germany, | do. | do. | 240 00 | $300 00 | $280 00 | $290 00 | $275 00 | United States. | No. |
| 70 | United States, | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 71 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 72 | do. | do. | do, | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 73 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 74 | do. | do. | do. | 70 20 | 209 10 | 282 80 | 282 47 | ..... | do. | No. |
| 75 | do. | do. | do. | 280 80 | 582 40 | ..... | ..... | ..... | do. | No. |
| 76 | do. | do. | do. | 192 00 | ..... | ..... | ..... | ..... | do. | No. |
| 77 | do. | do. | do. | 200 00 | 700 00 | 700 00 | 800 00 | 700 00 | do. | No. |
| 78 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 79 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 80 | do. | do. | do. | 88 00 | 135 20 | ..... | ..... | ..... | do. | No. |
| 81 | do. | do. | do. | 153 60 | 900 00 | 900 00 | 900 00 | 900 00 | do. | No. |
| 82 | do. | do. | do. | 100 00 | 600 00 | ..... | ..... | ..... | do. | No. |
| 83 | do. | do. | do. | 300 00 | ..... | ..... | ..... | ..... | do. | No. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 84 | do | do. | do. | 3 00 | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 85 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 86 | do. | do. | do. | 350 00 | 1,000 00 | 1,500 00 | 600 00 | 600 00 | do. | ..... | Yes. |
| 87 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 88 | do. | do. | do. | 48 80 | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 89 | do. | do. | do. | 332 80 | 665 60 | ..... | ..... | ..... | do. | ..... | No. |
| 90 | do. | do. | do. | 351 80 | 405 40 | 338 88 | 281 97 | 425 79 | do. | ..... | No. |
| 91 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | Sometimes. |
| 92 | do. | do. | do. | ..... | ..... | 600 00 | 600 00 | 600 00 | do. | ..... | No. |
| 93 | do | do. | do. | 351 00 | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 94 | do. | do. | do. | 450 00 | 900 00 | 900 00 | 900 00 | 900 00 | do. | ..... | No. |
| 95 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 96 | do. | do. | do. | 35 00 | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 97 | do. | do. | do. | 225 00 | 625 58 | 535 70 | 556 91 | 615 17 | do. | ..... | No. |
| 98 | do | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 99 | do | do. | do. | 100 00 | ..... | ..... | ..... | ..... | do. | ..... | Sometimes. |
| 100 | do. | do. | do. | 350 00 | 700 00 | 700 00 | 700 00 | 700 00 | do. | ..... | No. |
| 101 | do. | do. | do. | 83 20 | 456 80 | 616 40 | 588 00 | 504 00 | do. | ..... | No. |
| 102 | do. | do. | do. | 236 00 | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 103 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 104 | do. | do. | do. | 450 00 | 700 00 | 700 00 | 700 00 | 700 00 | do. | ..... | No. |
| 105 | do | do. | do. | 407 54 | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 106 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 107 | Wales, ..... | do. | do. | ..... | ..... | ..... | ..... | ..... | Wales, ..... | | No |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Plasterer, | | | Yes, | No. | | | 8 | No. | |
| 2 | do. | do. | | | do. | No. | | | 8 | No. | |
| 3 | do. | do. | | | do. | No machinery, | | | 8 | No. | |
| 4 | Ireland, | do. | | | do. | Yes. | Yes, | Lowered, | 8 | No. | |
| 5 | United States, | do. | | | do. | | | | 8 | Yes, | Yes. |
| 6 | do. | do. | | | do. | | | | 8 | No. | |
| 7 | do. | do. | | | do. | Yes. | Yes, | Lowered 10 per cent., | 8 | No. | |
| 8 | England. | do. | | | do. | No machinery. | No. | | 8 | No. | |
| 9 | Germany. | do. | | | do. | No, | No, | | 8 | No. | |
| 10 | Ireland, | do. | | | do. | No, | No, | | 8 | Yes, | Yes. |
| 11 | United States. | do. | | | do. | No, | | | 8 | No. | |
| 12 | do. | do. | Hour. | | do. | | | | 8 | No. | |
| 13 | Ireland. | do. | | | do. | No. | No, | | 8 | Yes, | No. |
| 14 | United States, | do. | Hour, | | do. | | | | 8 | No. | |
| 15 | England, | do. | | | do. | No, | | | 8 | No. | |
| 16 | do. | do. | | | do. | No, | | | 8 | No. | |
| 17 | United States, | do. | Hour, | 33 per cent. more, | do. | | | | 8 | No. | |
| 18 | England, | do. | | | do. | No machinery, | | | 8 | No. | |
| 19 | United States, | do. | | | do. | No, | No, | | 8 | No. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | do. | do. | | | do. | No. | Yes. | Raised wages. | 8 | Yes. | No. |
| 21 | do. | do. | | | No. | | | | | No. | |
| 22 | do. | do. | | | Yes. | | No. | | 8 | No. | |
| 23 | do. | do. | Hour. | | do. | No. | No. | | 8 | No. | |
| 24 | England. | do. | Piece. | 30 per cent. more. | do. | No. | No. | | 8 | No. | |
| 25 | do. | do. | Hour. | | do. | Yes: hod carriers. | No. | | 8 | Yes. | Yes. |
| 26 | United States. | do. | | | do. | No machinery. | | | 8 | No. | |
| 27 | do. | do. | | | do. | No machinery. | | | 9 | Yes. | No. |
| 28 | do. | do. | Hour. | | do. | No. | | | 8 | No. | |
| 29 | Ireland. | do. | | | do. | No. | No. | | 8 | No. | |
| 30 | do. | do. | Hour. | 10 per cent. more. | do. | No. | No. | | 8 | No. | |
| 31 | United States. | do. | | | do. | | | | 8 | No. | |
| 32 | do. | do. | | | do. | | | | 8 | No. | |
| 33 | do. | do. | Hour. | 50 per cent. more. | do. | No machinery. | | | 8 | Yes. | No. |
| 34 | do. | do. | | | do. | | | | 8 | No. | |
| 35 | do. | do. | | | do. | | | | 8 | No. | |
| 36 | do. | do. | Hour. | | do. | No. | No. | | 8 | No. | |
| 37 | Ireland. | do. | Piece. | | do. | | Yes: laborers. | Lowered 25 cts. per day. | 8 | No. | |
| 38 | United States. | do. | | | do. | No. | Yes. | Lowered. | 8 & 9 | No. | |
| 39 | do. | do. | Hour. | 15 per cent. more. | do. | No machinery. | | | 8 | No. | |
| 40 | Ireland. | do. | | | do. | | | | 8 | No. | |
| 41 | United States. | do. | | | do. | | | | 8 | No. | |
| 42 | do. | do. | | | do. | No. | | | 8 | Yes. | No. |
| 43 | do. | do. | Hour. | 75 per cent. more. | do. | No machinery. | | | 8 | No. | |
| 44 | do. | do. | | | do. | | | | 8 | No. | |
| 45 | do. | do. | | | do. | | | | 8 | No. | |
| 46 | do. | do. | * | | do. | No. | No. | | 8 | No. | |
| 47 | do. | do. | Hour. | | do. | No. | No. | | 8 | No. | |

* Piece work ruins the wages.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 48 | United States, | Plasterer, | ..... | ..... | Yes, | Yes; 50 per cent. mortar mixers. | No, ..... | ..... | 8 | No. | |
| 49 | do. | do. | Hour. | ..... | do. | No, ..... | No, ..... | ..... | 8 | No. | |
| 50 | do. | do. | Hour, | 100 per cent. more, | do. | ..... | ..... | ..... | 9 | Yes, | No. |
| 51 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 52 | do. | do. | Hour. | 60 per cent. more, | do. | Yes; mortar mixers, | ..... | ..... | 8 | No. | |
| 53 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 54 | do. | do. | ..... | ..... | do | No machinery, | ..... | ..... | 8 | No. | |
| 55 | Ireland, | do. | Hour, | ..... | do. | No machinery, | ..... | ..... | 8 | No. | |
| 56 | do. | do. | Hour, | 25 per cent. more, | do. | No, ..... | No. ..... | ..... | 8 | No. | |
| 57 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 58 | do. | do. | Hour, | 16 to 50 per cent. more, | do. | No machinery, | ..... | ..... | 8 | No. | |
| 59 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 60 | do. | do. | Hour, | ..... | do. | No machinery, | ..... | ..... | 8 | No. | |
| 61 | Wales, | do. | Hour. | ..... | do. | No. ..... | No, ..... | ..... | .... | Yes. | Yes. |
| 62 | England. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 63 | Ireland, | do | ..... | * ..... | do. | No machinery, | ..... | ..... | 8 | No. | |
| 64 | do. | do. | Hour, | ..... | do. | No machinery. | ..... | ..... | 8 | No. | |

* Piece work is injurious to the trade.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 65 | do. | do. | | | do. | No machinery. | | | 8 | Yes, | Yes. |
| 66 | England. | do. | | | do. | No, | No. | | 8 | Yes, | Yes. |
| 67 | do. | do. | | | do. | | | | 8 | o. | |
| 68 | do. | do. | | | do. | No. | No. | | 8 | No. | |
| 69 | Germany, | do. | | | do. | No. | No, | | 8 | No. | |
| 70 | United States, | do. | | | do. | No. | No, | | 8 | o. | |
| 71 | do. | do. | | | do. | | | | 8 | No. | |
| 72 | do. | do. | | | do. | No machinery | | | 8 | No. | |
| 73 | do. | do. | | | do. | | | | 8 | No. | |
| 74 | do. | do. | | | do. | No. | No, | | 8 | No. | |
| 75 | do. | do. | Hour. | 50 per cent. more. | do. | No machinery. | No. | | 8 | No. | |
| 76 | do. | do. | Hour, | 50 per cent. more. | do. | No machinery. | | | 8 | No. | |
| 77 | do. | do. | | | do. | No machinery, | | | 8 | No. | |
| 78 | do. | do. | | | do. | No machinery. | | | 8 | No. | |
| 79 | do. | do. | | | do. | No machinery, | | | 8 | No. | |
| 80 | do. | do. | Hour. | 10 per cent. moro, | do. | No machinery. | | | 8 | No. | |
| 81 | do. | do. | Hour, | *100 per cent. more, | do. | No machinery, | | | 8 | No. | |
| 82 | do. | do. | Hour, | *100 per cent. more, | do. | No machinery, | | | 8 | No. | |
| 83 | do. | do. | | | do. | No machinery, | | | 8 | No | |
| 84 | do. | do. | | | do. | No machinery. | | | 8 | No. | |
| 85 | do. | do. | | | do. | No. | | | 8 | No. | |
| 86 | do. | do. | | Very little difference | do. | † | No. | | 8 & 10 | No. | |
| 87 | do. | do. | | | do. | | | | 8 | No. | |
| 88 | do. | do. | Hour, | 100 per cent. more. | do. | No machinery. | | | 8 | No. | |
| 89 | do. | do. | Hour, | | do. | No. | | | 8 | Yes. | No. |
| 90 | do. | do. | | * | do. | No machinery. | | | 8 | | |
| 91 | do. | do. | Hour, | 30 per cent. more | do. | | | | 8 | No. | |
| 92 | do. | do. | Hour, | 50 per cent. more. | do. | | | | 8 | No. | |

* Piece work is injurious to the trade. † I believe machinery benefits labor.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 93 | United states, | Plasterer, | ..... | ..... | Yes, | No. | ..... | ..... | 8 | No. | |
| 94 | do. | do. | Hour, | 100 per cent. more. | do. | No machinery, | ..... | ..... | 8 | Yes, | No. |
| 95 | do. | do. | ..... | ..... | do. | No. | No, | ..... | 8 | No. | |
| 96 | do. | do. | Hour, | 33 per cent. more, | do. | No. | No, | ..... | 8 | No. | |
| 97 | do. | do. | Hour, | 45 to 90 per cent. | do. | ..... | ..... | ..... | 8 | No. | |
| 98 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 99 | do. | do. | Hour, | ..... | do. | No, | ..... | ..... | 9 | No. | |
| 100 | do. | do. | Hour, | ..... | do. | No. | No | ..... | 8 | No. | |
| 101 | do. | do. | Hour, | ..... | do. | No, | No, | ..... | 8 | No. | |
| 102 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 103 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 104 | do. | do. | Hour, | 45 per cent. more. | do. | No. | No, | ..... | 8 | No. | |
| 105 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 8 | No. | |
| 106 | do. | do. | ..... | ..... | do. | No machinery. | ..... | ..... | 8 | Yes. | No. |
| 107 | Wales, | do. | ..... | ..... | do. | No, | No, | ..... | 8 | No. | |

## WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Ireland. | Carpenter. | 7 years. | 30 cts. | 30½ cts. | 30½ cts. | 30½ cts. | 30½ cts. | months. | 2 months | 2 months. | months. | 2 months. |
| 2 | do. | do. | 5 | 28 | 30 | 30 | 30 | 33 | 3 | | | | |
| 3 | do. | do. | 5 | 28 | 31 | | | | | | | | |
| 4 | do. | do. | 5 | 31 | 31 | 31 | 31 | 31 | 4 | 4 | 2 | 1 | 1½ |
| 5 | do. | do. | 4 | 26 | 25 | 25 | 25 | 25 | 0 | 4 | 8 | 5 | 12 |
| 6 | do. | do. | 4 | 30 | 30 | 31 | 31 | 31 | 4 | 6 | 4 | 2 | 2 |
| 7 | do. | do. | 7 | 25 | | | | | 6 | | | | |
| 8 | England. | do. | 5 | 31 | 31 | 31 | 31 | 31 | 0 | | | 1 | 1½ |
| 9 | do. | do. | 7 | 25 | | | | | 2 | | | | |
| 10 | do. | do. | 5 | 31 | | | | | 2 | | | | |
| 11 | do. | do. | 5½ | 30 | 30 | 30 | 30 | 30 | 3 | 4 | 3½ | 3 | 6 |
| 12 | do. | do. | 3 | 25 | 25 | 25 | 27½ | 27½ | 2 | 3 | 3 | 3 | 3 |
| 13 | do. | do. | 4 | 30 | 30 | 30 & 33 | 30 & 33 | 30 & 33 | 2 | | | | |
| 14 | Denmark. | do. | 5 | | 30 | 30 | 30 | 30 | 6 | | | | |
| 15 | do | do | 5 | 25 | 27½ | 27½ | 27½ | 25 | 5 | 4 | | 1 | 2 |
| 16 | do. | do. | 3 | 25 | | | | | 6 | 6 | 6 | 6 | 6 |
| 17 | Germany. | do. | 3 | 25 | 30½ | 30½ | 30½ | 30½ | 2½ | | 6 | 6 | 6 |
| 18 | do. | do. | 3 | 20 | 20 | 20 | 20 | 20 | 0 | | | | |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment. | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 19 | Germany, | Carpenter, | 6½ years, | 28 cts, | 28 cts, | 31 cts, | 31 cts, | 31 cts, | months, | 3 months, | months, | 3 months, | 3 months, |
| 20 | Switzerland, | do. | 4 | 30 | 30 | 29 | 28 | 22 | ..... | ..... | ..... | ..... | ..... |
| 21 | Scotland, | do. | 5 | 30 | 31 | 31 | 31 | 35 | 3 | 4½ | 2 | 3 | 3 |
| 22 | United States, | do. | 2 | 30 | 30 | 30 | 30 | 30 | 1 | 1 | 1 | 1 | 1 |
| 23 | do. | do. | 5 | 31 | 31 | 31 | 31 | 31 | ..... | ..... | ..... | ..... | ..... |
| 24 | do. | do. | 4 | 30 | 31 | 31 | 31 | 31 | 3 | 2 | 2 | 2 | 2 |
| 25 | do. | do. | 3 | 28 | 31 | 31 | 31 | 31 | 2 | 2 | 2 | 2 | 2 |
| 26 | do. | do. | 4 | 26 | 26 | 26 | 27½ | 27½ | 1 | 2 | ..... | ..... | ..... |
| 27 | do. | do. | 4 | 27 | 27 | 27 | 25 | 25 | ..... | ..... | ..... | ..... | ..... |
| 28 | do. | do. | 5 | 30 | 30 | 30 | 30 | 30 | 5 | 6 | 7 | 6 | 6 |
| 29 | do. | do. | 3½ | 30 | 30 | 30 | 30 | 30 | 2 | 3 | ..... | ..... | ..... |
| 30 | do. | do. | 3 | 31 | 31 | 31 | 31 | 31 | 1½ | ..... | ..... | ..... | ..... |
| 31 | do. | do. | 3½ | 33 | 33 | 31 | 31 | 28 | ..... | ..... | ..... | 3 | 3 |
| 32 | do. | do. | 3½ | 27½ | 27½ | 27½ | 27½ | 27½ | ..... | ..... | 2 | 3 | 1 |
| 33 | do. | do. | 3 | 30 | 28 | 30 | 30 | 30 | ..... | ..... | 2 | ..... | ..... |
| 34 | dd. | do. | 4 | 30 | 30 | 30 | 30 | 30 | ..... | ..... | 3 | 3 | 4 |
| 35 | do. | do. | 4 | 30 | 30 | 30 | 30 | 30 | 3 | 3 | 3 | 2 | 2 |
| 36 | do. | do. | 5 | 33 | 31 | 31 | 31 | 31 | 1 | ..... | ..... | ..... | ..... |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 37 | do. | do. | 3 | 30 | 30 | 30 & 33 | 31 | 30 & 35 | 1 | 1 | 1 | 2 | 2 |
| 38 | do. | do. | 4 | 25 & 30 | 30 | 30 | 33 | 35 | ..... | 4 | 4 | 4 | 4 |
| 39 | do. | do. | 4 | 33 | 33 | 30 | 44 | 44 | 1 | ..... | ..... | ..... | ..... |
| 40 | do. | do. | 4 | 33 | 30 | 30 | 30 | 30 | ..... | ..... | ..... | 1 | 3 |
| 41 | do | do. | 3 | ..... | ..... | ..... | 31 | 31 | ..... | ..... | ..... | ..... | ..... |
| 42 | do. | do. | 4 | 31 | 31 | 31 | 31 | 31 | 1 | ½ | ..... | ..... | ..... |
| 43 | do. | do. | 7 | 35 | 35 | 35 | 35 | 35 | ..... | ..... | ..... | ..... | ..... |
| 44 | do. | do. | 4 | 30 | 30 | 33 | 33 | 33 | 2 | ..... | ..... | ..... | ..... |
| 45 | do. | do | 4 | 35 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 46 | do. | do. | 3 | 28 | 28 | 28 | 28 | 28 | 1½ | ..... | ..... | ..... | ..... |
| 47 | do. | do. | 2 | 30 | 30 | 30 | 30 | 30 | 5 | 3 | 2 | ..... | ..... |
| 48 | do. | do. | 3 | 30½ | 30½ | 30 | 31 | 30½ | 3 | 2 | 1 | ..... | ..... |
| 49 | do. | do. | 4⅜ | 30 | 30 | 30 | 30 | 25 | 3 | 5 | 3 | 3 | ..... |
| 50 | do. | do. | 1½ | 31 | 31 | 31 | 34 | 31 | ..... | 6 | ..... | ..... | ..... |
| 51 | do. | do. | 4 | 28 | 28 | 28 | 28 | 28 | 1 | 4 | ..... | ..... | ..... |
| 52 | do. | do. | 5½ | 30 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 53 | do. | do. | 3 | 30½ | 30 | 30 | 30 | 30 | 2 | 2 | 4 | 4 | 4 |
| 54 | do. | do. | 4 | 30 | 30 | 30 | 30 | 30 | ..... | 1 | 1 | 1 | 1 |
| 55 | do. | do. | 4 | 30 | 30 | 30 | 30 | 30 | ½ | 1 | 2 | ..... | 1 |
| 56 | do. | do. | 3 | 30 | 30 | 30 | 27 | 35 | 2 | 2 | 3 | 2 | 4 |
| 57 | do. | do. | 3 | 31 | 31 | 28 | 28 | 28 | 3 | 1½ | 1 | 2 | 4 |
| 58 | do. | do. | 4 | 30 | 30 | 30 | 30 | 30 | 3 | 2 | ..... | ..... | 3 |
| 59 | do. | do. | 4½ | 28 | 31 | 31 | 31 | 31 | 3 | 6 | 4 | 6 | ..... |
| 60 | do. | do. | 4 | 30 | 30 | 30 | 30 | 25 | 1 | ..... | ..... | ..... | ..... |
| 61 | do. | do. | 3 | 33 | 30 | ..... | ..... | ..... | ½ | ..... | ..... | ..... | ..... |
| 62 | do. | do. | 4 | 31 | 31 | 31 | 31 | 31 | 2 | 4 | 4 | 4 | 4 |
| 63 | do | do. | Yes. | 28-31 | 30 | ..... | ..... | ..... | 3 | ..... | ..... | ..... | ..... |
| 64 | do. | do. | 2 | 30 | 30 | 30 | 30 | 30 | ..... | ..... | ..... | ..... | ..... |
| 65 | do. | do. | 4 | 30 | 31 | 31 | 31 | 31 | 2 | 4 | 4 | 4 | 4 |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 66 | United States. . | Carpenter. . . | 3 years, . . . | 30 cts. . . | 30 cts. . . | 30 cts. . . | 28 cts. . . | 22 cts. . . | 3 months, . . | months, | months, | months, | months, |
| 67 | do. . . | do. . . | 5 . . . | 28 . . | 28 . . | 30 . . | 30 . . | 31 . . | 3 . . | 4 | . . . . . | . . . . . | . . . . . |
| 68 | do. . . | do. . . | 2 . . . | 30 . . | 30 . . | 30 . . | 30-33 . . | 30 . . | 1 . . | . . . . . | 2 | 2 | 1 |
| 69 | do. . . | do. . . | . . . . . | 30 . . | 30 . . | 30 . . | 30 . . | 30 . . | . . . . . | 2 | . . . . . | . . . . . | . . . . . |
| 70 | do. . . | do. . . | 4 . . . | 33 . . | 38 . . | 38 . . | 38 . . | 33 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 71 | do. . . | do. . . | 3 . . . | 33 . . | 33 . . | 33 . . | 33 . . | 33 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 72 | do. . . | do. . . | 3 . . . | 22 . . | 22 . . | 22 . . | 22 . . | 30 . . | 2 . | . . . . . | . . . . . | . . . . . | . . . . . |
| 73 | do. . . | do. . . | 4 . . . | 28 . . | 28 . . | 28 . . | 28 . . | 28 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 74 | do. . . | do. . . | 3 . . . | 27 . . | 30 . . | 30 . . | 30 . . | 30 . . | 2 . . | 2 | . . . . . | 2 | . . . . . |
| 75 | do. . . | do. . . | 6 . . . | *$2 75 . . | $3 00 . . . | $2 75 . . . | $2 75 . . . | $2 75 . . . | 2 . . | 2 | 3 | 2 | 3 |
| 76 | do. . . | do. . . | 3 . . . | 30 . . | 30 . . | 30 . . | 30 . . | 27 . . | . . . . . | 1 | 1 | 1 | . . . . . |
| 77 | do. . . | do. . . | 4 . . . | 30 . | 30 . . | 30 . . | 30 . . | 30 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 78 | do. . . | do. . . | 3 . . . | 30 . . | 30 . . | 30 . . | 30 . . | 30 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 79 | do. . . | do. . . | 3 . . . | 22 . . | 30 . . | 30 . . | 30 . . | 30 . . | 3 . . | 2 | . . . . . | . . . . . | . . . . . |
| 80 | do. . . | do. . . | 4 . . . | 30 . . | 31 . . | 31 . . | 31 . . | 31 . . | 6 . . | 2 | 4 | 4 | 3 |
| 81 | do. . . | do. . . | 3 . . . | 30 . . | 31 . . | 31 . . | 31 . . | 31 . . | 5 . . | 6 | 2 | 1 | 1 |
| 82 | do. . . | do. . . | 3 . . . | 31 . . | 31 . . | 31 . . | 31 . . | 31 . . | 3 . . | 3 | 1 | 1 | 1½ |

* Paid by day.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83 | do. | do. | 4 | 30 | 30 | 30 | 30 | 30 | 5 | 3 | ..... | ..... | ..... | |
| 84 | do. | do. | 5 | 31 | 31 | 31 | 31 | 31 | 1 | ..... | ..... | ..... | ..... | |
| 85 | do. | do. | Yes | 30 | 31 | 31 | 31 | 31 | 3 | 5 | 4 | 3 | 3 | |
| 86 | do. | do. | 3½ | 28 | 28 | 28 | 31 | ..... | ..... | ..... | ..... | ..... | ..... | |
| 87 | do. | do. | 3 | 33 | 30 | 30 | 30 | 30 | 1 | ..... | 1 | 1 | ..... | |
| 88 | do. | do. | 4 | 30 | 31 | 29 | 31 | 31 | 1½ | ..... | ..... | ..... | ..... | |
| 89 | do. | do. | 4 | *$1 50 | $1 67 | $1 67 | $1 67 | $1 67 | ..... | ..... | ..... | ..... | ..... | |

* Paid by day.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly. | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Ireland, | Carpenter, | Weekly, | $400 00 | $700 00 | $742 00 | $700 00 | $750 00 | Ireland, | Sometimes. |
| 2 | do. | do | do. | 150 00 | 429 00 | 429 00 | 429 00 | 468 00 | do. | No. |
| 3 | do. | do. | do. | | | | | | do. | No. |
| 4 | do | do. | do. | | | | | | do. | No. |
| 5 | do. | do. | do. | 405 60 | 520 00 | 260 00 | 455 00 | | United States. | No. |
| 6 | do. | do. | do. | 65 00 | | | | | do. | No. |
| 7 | do. | do. | do. | | | | | | Ireland. | No. |
| 8 | England, | do. | do. | 462 00 | 924 00 | 924 00 | 770 00 | 694 00 | England, | No. |
| 9 | do. | do. | Semi-monthly, | | | | | | do. | No. |
| 10 | do. | do. | Weekly, | | | | | | do. | No. |
| 11 | do. | do | do. | | | | | | U. S. & England, | Sometimes. |
| 12 | do. | do. | do. | | | | | | United States, | No. |
| 13 | do. | do. | do. | | | | | | England. | No. |
| 14 | Denmark, | do. | Semi-monthly. | | | | | | Denmark, | No. |
| 15 | do. | do. | Weekly, | 60 00 | 525 00 | 800 00 | 700 00 | 600 00 | do. | No. |
| 16 | do. | do. | Semi-monthly, | 390 00 | 780 00 | 780 00 | 780 00 | 780 00 | do. | No. |
| 17 | Germany, | do. | Weekly, | 216 00 | 429 00 | 429 00 | 429 00 | 429 00 | Germany, | No. |
| 18 | do. | do. | do. | 200 00 | 400 00 | 400 00 | 400 00 | 400 00 | do. | No. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | do. | do. | 342 00 | 406 00 | 704 00 | 556 00 | 390 00 | do. | No. |
| 20 | Switzerland | do. | do. | | | | | | Switzerland | No. |
| 21 | Scotland | do. | do. | 205 40 | 561 11 | 711 04 | 661 00 | 673 56 | Scotland | No. |
| 22 | United States | do. | do. | 275 00 | 290 00 | 310 00 | 325 00 | 315 00 | United States | No. |
| 23 | do. | do. | do. | | | | | | do. | No. |
| 24 | do. | do. | do. | | | | | | do. | No. |
| 25 | do. | do. | do. | 121 00 | 200 00 | 200 00 | 200 00 | 200 00 | do. | No. |
| 26 | do. | do. | Semi-monthly | | 650 00 | 800 00 | 800 00 | 800 00 | do. | No. |
| 27 | do. | do. | Weekly | 382 75 | 731 26 | 612 58 | 279 56 | 681 34 | do. | No. |
| 28 | do. | do. | do. | 67 50 | 405 00 | 338 00 | | | do. | No. |
| 29 | do. | do. | do. | | | | | | do. | No. |
| 30 | do. | do. | do | 330 00 | 800 00 | 800 00 | 800 00 | 800 00 | do. | No. |
| 31 | do. | do. | do. | 468 00 | 936 00 | 858 00 | | | do. | No. |
| 32 | do. | do. | do. | 360 00 | 720 00 | 600 00 | 600 00 | 200 00 | do. | No. |
| 33 | do. | do. | do. | 400 00 | 800 00 | | | | do. | No. |
| 34 | do. | do. | do. | | 300 00 | 600 00 | 700 00 | 650 00 | do. | No. |
| 35 | do. | do. | do. | 194 52 | 194 52 | 194 52 | 259 36 | 259 36 | do. | No. |
| 36 | do. | do. | do. | | | | | | do. | No. |
| 37 | do. | do. | do. | 304 00 | 683 04 | 670 00 | 588 43 | 668 36 | do. | No. |
| 38 | do. | do. | do. | | | | | | do. | No. |
| 39 | do. | do. | Semi monthly | 405 00 | | | | | do. | No. |
| 40 | do. | do. | Weekly | 468 00 | 860 00 | 860 00 | 693 00 | 500 00 | do. | No. |
| 41 | do. | do. | do. | | | | 755 00 | 726 44 | do. | No. |
| 42 | do. | do. | do. | | | | | | do. | No. |
| 43 | do. | do. | Monthly | 491 90 | 983 80 | 983 80 | 983 80 | 983 80 | do. | No |
| 44 | do. | do. | Weekly | 264 00 | 388 00 | 432 00 | 432 00 | 432 00 | do. | No |
| 45 | do. | do | | | | | | | do. | No. |
| 46 | do. | do. | Semi-weekly | 300 00 | 700 00 | 700 00 | 700 00 | 700 00 | do. | No. |
| 47 | do | do | Weekly | 65 00 | 540 00 | 600 00 | | | do. | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 48 | United States. . . . . | Carpenter. . . . . | Weekly, . . . . . | $297 00 | $326 00 | $340 00 | . . . . . | $352 00 | United States. . . . . | No. |
| 49 | do. . . . . | do. . . . . | do. . . . . | 117 00 | 700 00 | . . . . . | . . . . . | 780 00 | do. . . . . | No. |
| 50 | do. . . . . | do. . . . . | do. . . . . | . . . . . | 388 00 | 800 00 | $800 00 | 800 00 | do. . . . . | No. |
| 51 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 52 | do. . . . . | do. . . . . | do. . . . . | 363 20 | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 53 | do. . . . . | do. . . . . | Weekly & monthly, | 210 00 | 350 00 | 350 00 | 350 00 | 350 00 | do. . . . . | No. |
| 54 | do. . . . . | do. . . . . | Weekly. . . . . | 390 00 | 780 00 | 750 00 | 750 00 | 750 00 | do. . . . . | N |
| 55 | do. . . . . | do. . . . . | do. . . . . | 388 80 | 356 40 | 275 40 | 421 20 | 356 40 | do. . . . . | No. |
| 56 | do . . . . . | do. . . . . | do. . . . . | 473 57 | 460 95 | 409 75 | 365 20 | 320 48 | do. . . . . | No. |
| 57 | do. . . . . | do. . . . . | do. . . . . | 198 00 | 198 00 | 264 00 | 480 00 | 240 00 | do. . . . . | No. |
| 58 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 59 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 60 | do. . . . . | do . . . . | do. . . . . | 300 00 | 700 00 | 700 00 | 700 00 | 700 00 | do. . . . . | No. |
| 61 | do. . . . . | do. . . . . | do. . . . . | 450 00 | 624 00 | . . . . . | . . . . . | . . . . . | do. | |
| 62 | do. . . . . | do. . . . . | do. . . . . | 200 00 | 400 00 | 400 00 | 400 00 | 400 00 | do. . . . . | No. |
| 63 | do. . . . . | do. . . . . | do. . . . . | 65 00 | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | Sometimes |
| 64 | do. . . . . | do . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 65 | do. . . . . | do. . . . . | do. . . . . | 200 00 | 400 00 | 400 00 | 400 00 | 400 00 | do. . . . . | No. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 66 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do | ..... | No. |
| 67 | do. | do. | do. | 180 00 | 480 00 | ..... | ..... | ..... | do | ..... | No. |
| 68 | do. | do. | do. | 356 40 | 421 20 | 291 60 | 291 60 | 356 40 | do. | ..... | No. |
| 69 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 70 | do. | do. | do. | 468 00 | 1,000 00 | 1,000 00 | 1,000 00 | 936 00 | do. | ..... | No. |
| 71 | do. | do. | do. | 242 97 | 621 67 | 872 80 | 842 00 | 721 00 | do | ..... | No. |
| 72 | do, | do. | Monthly, | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 73 | do. | do | do. | 360 00 | 720 00 | 720 00 | 720 00 | 720 00 | do. | ..... | No. |
| 74 | do. | do. | Weekly, | 197 56 | 595 79 | 711 13 | 498 30 | 500 00 | do. | ..... | Sometimes |
| 75 | do. | do. | do. | 148 50 | 858 00 | 643 50 | ..... | ..... | do. | ..... | No. |
| 76 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do | | |
| 77 | do. | do. | do. | 390 00 | 780 00 | 780 00 | 780 00 | 780 00 | do. | ..... | No. |
| 78 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | .. | No. |
| 79 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 80 | do. | do. | do. | ..... | 216 00 | 118 00 | 108 00 | 162 00 | do | ..... | No. |
| 81 | do. | do. | do. | ..... | 462 00 | 528 00 | 594 00 | 669 00 | do. | ..... | No. |
| 82 | do. | do. | do. | 239 25 | 379 50 | 354 75 | 354 75 | 330 00 | do | ..... | No. |
| 83 | do. | do. | do. | 50 00 | 250 00 | 250 00 | 250 00 | 250 00 | do. | ..... | No. |
| 84 | do. | do. | do. | 356 50 | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 85 | do. | do. | do. | 243 89 | 710 58 | 632 75 | 641 20 | 685 20 | do. | ..... | No. |
| 86 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do | ..... | No. |
| 87 | do. | do. | do. | 375 00 | 400 00 | ..... | ..... | ..... | do. | | |
| 88 | do. | do. | do. | 196 80 | 364 74 | 281 17 | 212 07 | 180 27 | do. | ..... | No. |
| 89 | do. | do. | do | 281 00 | 502 27 | 503 94 | 503 94 | 503 94 | do. | ..... | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Ireland, . . . . | Carpenter. | Piece, . . | $6 or $7 more a week, | Yes. . | No, . . . . . | No. . . . . | . . . . . | 9 | Yes, . | Yes. |
| 2 | do. . . . . | do. | Hour, . . | $1.50 per day more, | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 3 | do. . . . . | do. | Hour, . . | . . . . . | do. . | No, . . . . . | . . . . . | . . . . . | 9 | No. | |
| 4 | do. . . . . | do. | Hour, . . | . . . . . | do. . | No. . . . . | No. . . . . | . . . . . | 9 | Yes, . | No. |
| 5 | do. . . . . | do. | Hour, . . | 3 to 5 per cent. more. | do. . | Yes, . . . . . | Yes, . . . . . | Lowered 5 per cent., . | 10 | No. | |
| 6 | do. . . . . | do. | . . . . . | A great difference, . | do. . | Yes, . . . . . | Yes, . . . . . | Lowered to a great extent. | 9 | Yes, . | Yes. |
| 7 | do. . . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | |
| 8 | England, . . . | do. | Hour, . . | *About 100 p. c. more, | do. . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | Yes. |
| 9 | do. . . . | do. | . . . . . | . . . . . | do. . | No machinery, . . . . . | . . . . . | . . . . . | 9 | No. | |
| 10 | do. . . . | do. | . . . . . | . . . . . | do. . | No machinery, . . . . . | . . . . . | . . . . . | 9 | No. | |
| 11 | do. . . . | do. | . . . . . | . . . . . | do. . | No machinery, . . . . . | . . . . . | . . . . . | 9 | No. | |
| 12 | do. . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 13 | do. . . . | do. | . . . . . | . . . . . | do. . | Yes. . . . . | Yes, . . . . . | Lowered wages, . . . . | 9 | No. | |
| 14 | Denmark. . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | | |
| 15 | do. . . . | do. | . . . . . | . . . . . | do. . | Yes, . . . . . | Yes, . . . . . | Lowered wages, . . . . | 9 & 10 | No. | |
| 16 | do. . . . | do. | . . . . . | . . . . . | do. . | No. . . . . | No. . . . . | . . . . . | 10 | Yes, . | Yes. |
| 17 | Germany, . . . | do. | . . . . . | . . . . . | do. . | Yes, about 25 per cent., . | Yes. . . . . | Lowered about 15 p. c. | 9 | No. | |

* Piece work is ruining the trade.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | do. . . . | do. | Hour. . . | 50 per ent. more. . . | do. . | Yes; about 25 per cent. . . | Yes. . . . . | Lowered about 33⅓ p. c. | 10 | No. | |
| 19 | do. . . . . | do. | Hour. . . | 25 per cent. more. . . | do. . | About 50 per cent. . . . . | Yes. . . . . | Lowered about 40 p. c. | 9 | Yes. . | Yes. |
| 20 | Switzerland. . . | do. | Hour. . . | 65 per cent. more. . . | do. . | . . . . . | No. . . . . | . . . . . | 9 | Yes. . | Yes. |
| 21 | Scotland. . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 22 | United States. | do. | Hour. . . | 60 per cent. more. . . | do. . | . . . . . | No. . . . . | . . . . . | 9 | No. | |
| 23 | do. | do. | Hour. . . | 100 per cent. more. . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 24 | do. | do. | Hour. . . | 100 per cent. more. . | do. . | No machinery. . . . . | . . . . . | . . . . . | 9 | No. | |
| 25 | do. | do. | Hour. . . | 66⅔ per cent. more. . | do. . | No machinery. . . . . | . . . . . | . . . . . | 9 | No. | |
| 26 | do. | do. | . . . . . | . . . . . | do. | Yes. . . . . | Yes. . . . . | Lowered wages. . . . | 10 | No. | |
| 27 | do. | do. | *Hour. . . | . . . . . | do. . | No. . . . . | No. . . . . | . . . . . | 10 | No. | |
| 28 | do. | do. | . . . . . | . . . . . | do. . | Yes. . . . . | Yes. . . . . | . . . . . | 9 | No. | |
| 29 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 30 | do. | do. | . . . . . | . . . . . | do. . | No. . . . . | Yes. . . . . | Lowered 25c. p. day. | 9 | No. | |
| 31 | do. | do. | Hour. . . | 50 per cent. more. . . | do. . | No. . . . . | No. . . . . | . . . . . | 9 | No | |
| 32 | do. | do. | . . . . . | . . . . . | do. . | No. . . . . | No. . . . . | . . . . . | 10 | No. | |
| 33 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | No. . . . . | . . . . . | 9 | Yes. | No. |
| 34 | do. | do. | Hour. . . | 100 per cent. more. . | do. . | Yes. . . . . | Yes. . . . . | Lowered wages. . . . | 9 | No. | |
| 35 | do. | do. | Hour. . . | . . . . . | do. . | Yes, 20 per cent. . . . . | No. . . . . | . . . . . | 9 | Yes. | No. |
| 36 | do. | do. | Hour. . . | 100 per cent. more. . | do. . | Yes. . . . . | Yes. . . . . | Lowered wages. . . . . | 9 | Yes. | No. |
| 37 | do. | do. | Hour. . . | 100 per cent. more. . | do. . | Yes. thousands. . . . . | No . . . . . | . . . . . | 9 | No. | |
| 38 | do. | do. | Hour. . . | 100 per cent more. . | do. . | Yes. . . . . | Yes. . . . . | Lowered wages. . . . | 9 | No. | |
| 39 | do. | do. | Hour. . . | 100 per cent. more. . | do. . | No. . . . . | No. . . . . | . . . . . | 9 | No. | |
| 40 | do. | do. | Hour. . . | 20 per cent. more. | do . | No. . . . . | Yes. . . . . | Lowered 20 per cent. . | 9 | No. | |
| 41 | do. | do. | Hour. . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 42 | do. | do. | Hour. . . | $2 per day more. . . | do. . | Yes. 33 per cent. . . . . | Yes. . . . . | Lowered about 25 p. c. . | 9 | No. | |
| 43 | do. | do. | Hour. . . | 50 to 75 cents per day more. | do. . | No. . . . . | No. . . . . | . . . . . | 9 | No. | |
| 44 | do. | do. | . . . . . | . . . . . | do . | No machinery. . . . . | . . . . . | . . . . . | 9 | Yes. | Yes. |
| 45 | do. | do. | *Hour. . . | A vast difference. . . | do. . | No. . . . . | No. . . . . | . . . . . | 9 | No. | |

*Piece work kills all trades.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workman, if so to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 46 | United States. | Carpenter, | Hour, . . | 33 per cent. more, | Yes, . | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 47 | do. | do. | Hour, . . | 75 cts. per day more. | do. | No, . . . . . | No, . . . . . | . . . . . | 9 | Yes, | No. |
| 48 | do. | do. | Hour, . . | $1 to $1 50 p. d. more, | do. . | . . . . . | . . . . . | . . . . . | 9 & 10 | No. | |
| 49 | do. | do. | Hour, . . | . . . . . | do. . | Yes, . . . . . | No, . . . . . | . . . . . | 9 & 10 | No. | |
| 50 | do. | do. | Hour, . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 51 | do. | do. | . . . . . | . . . . . | do. . | Yes, . . . . . | Yes, . . . . . | . . . . . | 8 & 12 | No. | |
| 52 | do. | do, | Hour, . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 53 | do. | do. | Hour, . . | 50 to 75 cents per day more. | do. . | Yes, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 54 | do. | do. | Hour. . . | $1 per day more, . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 9 | No | |
| 55 | do. | do. | Hour, . . | 100 per cent. more, | do. . | . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 56 | do. | do. | Hour, . . | 100 per cent. more, . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 57 | do. | do. | Hour, . . | 25 per cent. more, . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 58 | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 9 | No | |
| 59 | do. | do. | Hour, . . | $1.75 per day more, | do. . | No, . . . . . | Yes. . . . . | . . . . . | 9 | No. | |
| 60 | do. | do. | Hour. . | 50 per cent more, . . | do. . | Yes, 50 per cent., . . . . . | Yes, . . . . . | Lowered 20 per cent., | 9 | No. | |
| 61 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. | |

* Piece work a curse to the trade.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 62 | do. | do. | Hour. . . | 50 per cent. more. . | do. . | Yes, . . . . . | Yes, . . . . . | Lowered 10 per cent. . | 9 | No |
| 63 | do. | do. | Hour. . . | 200 per cent. more. . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. |
| 64 | do. | do. | Hour, . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 9 | No. |
| 65 | do. | do. | Hour. . . | 80 per cent. more, . | do. . | Yes, 90 per cent. displaced. | Yes, . . . . . | Lowered about 10 per ct | 9 | No. |
| 66 | do. | do. | Hour. . . | 80 per cent. more, . | do. . | Yes, . . . . . | Yes. . . . . | Lowered about 20 per ct | 9 | No. |
| 67 | do. | do. | Hour, . . | .50 to $1 more per day. | do. . | No, . . . . . | . . . . . | . . . . . | 9 | No. |
| 68 | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | No. . . . . | . . . . . | 9 | No. |
| 69 | do. | do. | Hour. . . | 75 to 90c per day more. | do. . | No. . . . . | No. . . . . | . . . . . | 9 | No. |
| 70 | do. | do. | . . . . . | . . . . . | do. . | No. . . . . | . . . . . | . . . . . | 9 | No. |
| 71 | do. | do. | . . . . . | . . . . . | do. . | No machinery, . . . . . | . . . . . | . . . . . | 9 | No. |
| 72 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 10 | No. |
| 73 | do. | do. | Hour. . . | 10 per cent. more, . | do. . | No, . . . . . | No. . . . . | . . . . . | 9 | No. |
| 74 | do. | do. | Hour. . . | 100 per cent. more, . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. |
| 75 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | Yes, . . . . . | Lowered. . . . . | 9 | No. |
| 76 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | |
| 77 | do. | do. | Hour. . . | 100 per cent. more, . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. |
| 78 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. |
| 79 | do. | do. | Hour, . . | .75 to $1 per day more, | do. . | . . . . . | . . . . . | . . . . . | 9 | No. |
| 80 | do. | do. | Hour, . . | $1 per day more, . . | do. . | No . . . . . | No, . . . . . | . . . . . | 9 | No. |
| 81 | do. | do. | Hour. . . | 100 per cent. more, . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. |
| 82 | do. | do | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. |
| 83 | do. | do. | . . . . . | . . . . . | do. . | Yes. 50 per cent., . . . . . | . . . . . | . . . . . | 9 | No. |
| 84 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | No. . . . . | . . . . . | 9 | No. |
| 85 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | No. . . . . | . . . . . | 9 | No |
| 86 | do. | do. | Hour. . . | 50 per cent. more. . | do . | . . . . . | Yes. . . . . | . . . . . | 9 | Yes, . . Yes. |
| 87 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 9 | No. |
| 88 | do. | do. | Hour, . . | 50 to 75 per ct. more, | do. . | No. . . . . | No, . . . . . | . . . . . | 9 | No |
| 89 | do. | do. | . . . . . | . . . . . | do. . | No. . . . . | No, . . . . . | . . . . . | 9½ | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA.—*Continued.*

| Office number | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment. | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Ireland, | Painter, | 4 years. | 30 cts. | 30 cts. | 30 cts. | 30 cts. | cts. | 2 months. | 3 months. | 4 months. | 4 months. | 3 months, |
| 2 | do. | do. | 3 | 30 | 30 | 30 | 30 | 30 | | | | | |
| 3 | do. | do. | 7 | 30 | 30 | 30 | 30 | 30 | 2½ | 1½ | 1½ | 1 | 2 |
| 4 | do. | do. | 3 | 30 | | | | | 3 | | | | |
| 5 | do. | do. | 6 | 30 | 30 | 30 | 30 | 30 | 2 | 3 | 3 | 3 | 5 |
| 6 | Scotland. | do. | 6 | 30 | 30 | 30 | 30 | | | | | | |
| 7 | do. | do. | 5 | 30 | 30 | 30 | 30 | 30 | 5 | | | | |
| 8 | do. | do. | 5 | 25 | 25 | 25 | 25 | 25 | 5 | 4 | 4 | 4 | 4 |
| 9 | England, | do. | 7 | 30 | 30 | 30 | 30 | 30 | 1 | 2 | 2 | 2 | |
| 10 | do. | do. | 4 | 30 | 30 | 21 | 15 | 10 | 4 | 3 | | | |
| 11 | do. | do. | 5 | 30 | | 39 | 39 | 20 | | | 4 | 4 | 4 |
| 12 | do. | do. | 5 | 30 | | | | | 2 | 3 | 2 | 2 | |
| 13 | France. | do. | 5 | 30 | 30 | 30 | 30 | 30 | 1 | 1 | 1 | 1 | 1 |
| 14 | Germany. | do. | 4 | 20 | 25 | 30 | 30 | 30 | 6 | 5 | 3 | 3 | 1 |
| 15 | United States, | do. | 4 | 30 | | | | | ½ | | | 2 | |
| 16 | do. | do. | 5 | 25 | 25 | 25 | 25 | 25 | | 2 | 2 | 3 | 3 |
| 7 | do. | do. | 3 | 30 | 30 | 30 | 30 | 30 | 1½ | 2 | 2 | 3 | 1½ |
| | do. | do. | 4 | 30 | 30 | 30 | 30 | 30 | 1 | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do | do. | 4½ | 25 | 25 | 25 | ..... | ..... | 4 | ..... | ..... | ..... | ..... | ..... |
| 20 | do. | do. | 4 | 30 | 30 | 30 | 30 | 30 | 2 | 4 | 4 | 4 | 1 |
| 21 | do. | do. | 2 | 30 | 30 | 30 | 30 | 30 | 1½ | 2 | 1 | ½ | 1 |
| 22 | do. | do. | 5 | 30 | 30 | 30 | 30 | 30 | 2 | 1½ | ½ | 2 | 1½ |
| 23 | do. | do. | 4 | 30 | 30 | 30 | 30 | 30 | ..... | ..... | ..... | ..... | ..... |
| 24 | do. | do. | 4 | 30 | 30 | 30 | 23 | 23 | 1 | 3 | 3 | ..... | ..... |
| 25 | do. | do. | 5 | 30 | 30 | 30 | 30 | 30 | ½ | ½ | ½ | ½ | 1 |
| 26 | do. | do. | 4½ | 33 | 33 | 33 | 33 | 33 | ..... | ..... | ..... | ..... | ..... |
| 27 | do. | do | 5 | 30 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 28 | do. | do. | 4 | 30 | 30 | 30 | 30 | 30 | 1 | ½ | 1 | 2 | 2 |
| 29 | do. | do. | 5 | 30 | 30 | 30 | 30 | 30 | 2½ | 4 | 4 | 4 | 4 |
| 30 | do. | do. | 7 | 30 | 30 | 30 | 30 | 30 | 1 | 4 | 3 | 5 | 4 |
| 31 | do. | do. | 4 | 30 | 30 | 30 | 30 | 30 | 1 | 1 | 1 | 1 | 1 |
| 32 | do. | do. | 4 | 30 | 30 | 30 | 30 | 30 | 1 | 4 | 4 | 3 | 4 |
| 33 | do. | do. | 4 | 30 | 30 | 30 | 30 | 30 | 1½ | 2 | ..... | ..... | ..... |
| 34 | do. | do. | 4 | 30 | 30 | 30 | 35 | 35 | 3 | 4½ | 4 | 3 | 1 |
| 35 | do. | do. | 4 | 33 | 33 | 33 | 33 | 33 | ..... | 4 | 4 | 4 | 4 |
| 36 | do | do. | 4 | 30 | 30 | 30 | 30 | 30 | 3 | 6 | 6 | 5 | 6 |
| 37 | do. | do. | 5 | 30 | 25 | 25 | 25 | 25 | 2 | 4 | 3 | ..... | 1 |
| 38 | do | do. | 3 | 30 | 30 | 30 | 30 | 30 | ..... | ..... | ..... | ..... | ..... |
| 39 | do. | do. | 3 | 30 | 30 | 30 | 30 | 30 | 4 | ..... | ..... | ..... | ..... |
| 40 | do. | do. | 4½ | 30 | 30 | 30 | 30 | 30 | ..... | ..... | ..... | ..... | ..... |
| 41 | do. | do. | 5 | 30 | 30 | 30 | ..... | ..... | 2 | ..... | ..... | ..... | ..... |
| 42 | do. | do. | 5 | 30 | 30 | 30 | 30 | 30 | 5 | 8 | 4 | 4 | 3 |
| 43 | do. | do | 4 | 27 | 30 | 25 | 24 | 24 | ..... | 4 | 3 | 3 | 6 |
| 44 | do. | do. | 3 | 28 | 28 | 28 | 42 | 42 | 5 | 7 | 10 | 11 | 12 |
| 45 | do. | do. | 4* | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 46 | do. | do. | 4½ | 30 | 30 | 30 | 30 | 30 | 1 | 1 | 1 | 1 | 3 |

*Contractor.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30th, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 47 | United States. | Painter. | 4 years. | 30 cts. | 30 cts | 30 cts. | 30 cts. | 30 cts. | months. | 1 month. | ..... | ..... | ..... |
| 48 | do. | do. | 5 | 21 | ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... |
| 49 | do. | do | 4 | 30 | 30 | 30 | 30 | 30 | ..... | ..... | ..... | ..... | ..... |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality. where born. | Trade or occupation. | Are you paid weekly. monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30. 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Ireland, | Painters, | Weekly, | | | | | | United States, | No. |
| 2 | do. | do. | Monthly, | | $450 00 | $450 00 | $324 00 | $324 00 | do. | Yes. |
| 3 | do. | do. | Weekly, | $486 00 | 550 00 | 550 00 | 584 00 | 522 00 | Ireland, | No. |
| 4 | do. | do. | do. | | | | | | United States. | No. |
| 5 | do. | do. | do. | 275 00 | 631 80 | 631 80 | 631 80 | 486 00 | Ireland. | No. |
| 6 | Scotland, | do. | do. | 138 40 | 740 40 | 605 15 | 615 20 | | Scotland, | No. |
| 7 | do. | do. | do. | 65 00 | | | | | do. | No. |
| 8 | do. | do. | do. | 50 00 | | | | | do. | No. |
| 9 | England, | do. | do. | | | | | | England, | No. |
| 10 | do. | do. | do. | 124 00 | 480 00 | 350 00 | 240 00 | 192 00 | United States, | No. |
| 11 | do. | do. | do. | 421 80 | | | | | England, | No. |
| 12 | do. | do. | do. | | | | | | do. | Sometimes. |
| 13 | France, | do. | do. | | | | | | United States, | No. |
| 14 | Germany, | do. | do. | | | | | | Germany. | No. |
| 15 | United States, | do. | do. | | | | | | United States, | No. |
| 16 | do. | do. | do. | 600 00 | 675 00 | 600 00 | 550 00 | 400 00 | do. | Yes. |
| 17 | do. | do. | do. | 275 00 | | | | | do. | No. |
| 18 | do. | do. | Monthly, | 380 00 | 460 00 | 460 00 | 490 00 | 450 00 | do. | Yes. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 19 | United States, | Painter, | Weekly, | $221 08 | $523 90 | $415 60 | $378 54 | ..... | United States, | No. |
| 20 | do. | do. | do. | 278 00 | 536 60 | 536 60 | 536 60 | $536 60 | do. | No. |
| 21 | do, | do. | do. | 307 20 | 687 05 | 743 45 | 787 05 | 755 93 | do, | No. |
| 22 | do. | do. | do. | 268 30 | 670 25 | 602 40 | 680 10 | 618 70 | do. | No. |
| 23 | do. | do. | do. | 650 00 | ..... | ..... | ..... | ..... | do. | No. |
| 24 | do. | do. | do. | 200 00 | ..... | ..... | ..... | ..... | do. | No. |
| 25 | do. | do. | do. | 200 00 | 400 00 | 400 00 | 350 00 | 300 00 | do. | No. |
| 26 | do. | do. | do. | 400 00 | 800 00 | 800 00 | 800 00 | 800 00 | do. | No. |
| 27 | do. | do. | do. | 70 00 | ..... | ..... | ..... | ..... | do. | No. |
| 28 | do. | do. | Weekly & monthly, | 330 00 | 890 00 | 750 00 | 740 00 | 680 00 | do. | No. |
| 29 | do. | do. | do. do. | 200 00 | 420 00 | 475 00 | 500 00 | 540 00 | do. | No. |
| 30 | do. | do. | Semi-monthly, | 325 00 | 567 00 | 684 00 | 260 00 | 560 00 | Ireland, | No. |
| 31 | do. | do. | Weekly, | 368 15 | 736 30 | 736 30 | 736 30 | 736 30 | United States, | No. |
| 32 | do. | do. | Monthly, | 400 00 | 600 00 | 600 00 | 600 00 | 600 00 | do. | Sometimes. |
| 33 | do. | do. | Weekly, | 325 00 | 700 00 | 650 00 | 791 00 | ..... | do. | No. |
| 34 | do. | do. | do. | 215 00 | 500 00 | 545 00 | 650 00 | 700 00 | do. | |
| 35 | do. | do. | do. | 360 00 | 550 00 | 550 00 | 550 00 | 550 00 | do. | No. |
| 36 | do. | do. | do. | 150 00 | 300 00 | 300 00 | 300 00 | 300 00 | do. | No. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 37 | do. | do. | do. | 144 00 | 240 00 | 240 00 | 240 00 | ..... | do. | ..... | No. |
| 38 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 39 | do. | do. | do. | 74 50 | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 40 | do. | do | do. | 367 20 | 748 80 | 748 80 | 748 80 | 748 80 | do. | ..... | No. |
| 41 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 42 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do | ..... | No. |
| 43 | do. | do. | do. | 500 00 | 650 00 | 700 00 | 700 00 | 500 00 | do. | ..... | Sometimes. |
| 44 | do. | do. | Contract, | 65 00 | 450 00 | 810 00 | 1072 50 | 1100 00 | do | ..... | Yes. |
| 45 | do. | do. | Monthly. | 480 00 | 480 00 | 500 00 | 500 00 | 450 00 | do | ..... | Yes. |
| 46 | do. | do. | Weekly. | 360 50 | 357 00 | 354 70 | 335 40 | 325 00 | do. | ..... | No. |
| 47 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | Sometimes |
| 48 | do. | do. | do. | 165 00 | 400 00 | 360 00 | 460 00 | ..... | do. | ..... | No. |
| 49 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If their is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Ireland, | Painter, | | | Yes, | | | | 9 | No. | |
| 2 | do. | do | | No. | do. | No, | No. | | 9 & 10 | No. | |
| 3 | do. | do. | | | do. | | | | 9 | No. | |
| 4 | do. | do. | | | do. | No machinery, | | | 9 | No. | |
| 5 | do. | do. | Hour. | 100 per cent. more. | do. | | No. | | 9 | Yes. | Yes. |
| 6 | Scotland, | do. | | | do. | | | | 8 & 9 | No. | |
| 7 | do. | do. | | | do. | † | | | 9 | Yes. | Yes. |
| 8 | do. | do. | | | do. | No | No. | | 10 | No. | |
| 9 | England, | do. | | | do. | No, | No, | | 8 & 9 | No. | |
| 10 | do. | do. | | | | | | | 9 | No. | |
| 11 | do. | do. | | | | No machinery, | | | 9 | No. | |
| 12 | do. | do. | | No. | | | | | 9 | No. | |
| 13 | France, | do. | | | | No, | No, | | 9 | No. | |
| 14 | Germany, | do. | | | | No. | No, | | 9 | No. | |
| 15 | United States. | do. | | | | | | | 9 | No. | |
| 16 | do. | do. | Piece, | 20 per cent. more. | | No. | No. | | 9 | No. | |
| 17 | do. | do. | | ‡ | | | | | 8 & 9 | No. | |

† Paints were formerly ground by hand; now ground by machinery.
‡ More at car and carriage work, and less at house painting; 80 cts. more at car work, 50 cts. more at carriage work per day, and $1.50 less at house work.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | do. | do. | * | | | | | | 9 & 10 | No. | | |
| 19 | do. | do. | Hour, | | | No, | No | | 9 | No. | | |
| 20 | do. | do. | Hour, | 75 cts. per day more. | | No, | No. | | 9 | No. | | |
| 21 | do. | do. | | | | No machinery. | | | 8 & 9 | No | | |
| 22 | do. | do. | Hour, | | | No machinery, | | | 8 & 9 | No. | | |
| 23 | do. | do. | | | | No machinery. | | | 9 | No. | | |
| 24 | do. | do. | | | | No. | | | 9 | No. | | |
| 25 | do. | do. | | | | No. | | | 8 & 9 | No. | | |
| 26 | do. | do. | | | | | | | 8 & 9 | o. | | |
| 27 | do. | do. | | | | | | | 9 | | | |
| 28 | do. | do. | | | | | | | 8, 9, 10 | No. | | |
| 29 | do. | do. | Hour | | | No. | No. | | 9 | No. | | |
| 30 | do. | do. | | | | | | | 9 | No. | | |
| 31 | do. | do. | | | Yes. | | | | 9 | No. | | |
| 32 | do. | do. | Piece, | $300 per year more, | do. | No, | No. | | 9 & 10 | No. | | |
| 33 | do. | do. | | | do. | | | | 8 & 9 | No. | | |
| 34 | do. | do. | | | do. | Yes. | No. | | 9 | No. | | |
| 35 | do. | do. | Hour, | | do. | No machinery, | | | 9 | No. | | |
| 36 | do. | do. | Hour. | 35 per cent. more, | do | Yes, 50 per cent. in grinding paint. | Yes, | Lowered. | 8 & | No | | |
| 37 | do. | do | Hour, | | do | | | | 10 | No | | |
| 38 | do. | do. | | | do. | No. | No. | | & 9 | No. | | |
| 39 | do. | do | | | do. | No, | No, | | 8 & 9 | No | | |
| 40 | do. | do. | | | do. | No, | No, | | 8 & 9 | No. | | |
| 41 | do. | do. | Hour, | | do. | No. | No, | | 8 & 9 | No. | | |
| 42 | do. | do. | Hour, | | do. | | | | 8 & 9 | No. | | |
| 43 | do. | do. | Piece, | 22 per cent more, | do. | | | | 10 | No. | | |
| 44 | do. | do. | Hour, | | do | | | | 9 | Yes. | No. | |

* Piece work is the ruination of the trade.

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen. If so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | United States. | Painter, . . | Piece, . . | 60 cts. per day more. | Yes. | No. . . . . | Yes, . . . . . | Lowered, . . . . . | 9 | No. | |
| 46 | do. | do. . . | . . . . . | . . . . . | do. | No. . . . . | No. . . . . | . . . . . | 8 & 9 | No. | |
| 47 | do. | do. . . | . . . . . | . . . . . | do. | No machinery. . . . . | . . . . . | . . . . . | 8 & 9 | No. | |
| 48 | do | do. . . | Hour. . . | . . . . . | do. | No. . . . . | No, . . . . . | . . . . . | 10 | No. | |
| 49 | do. | do. . . | Hour, . . | 50 per cent. more, | do. | No. . . . . | No. . . . . | . . . . . | 9 | No. | |

## WORKMEN IN BUILDING TRADES—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Germany | Metal roofer | 5 years | 33 cts | 33 cts | 33 cts | 31 cts | 31 cts | 0 months | 0 months | 0 months | 2 months | 0 months |
| 2 | do. | do. | 3 | 28 | 28 | 28 | 28 | 28 | 3 | 2 | 1 | 1 | 2 |
| 3 | do. | do. | 3 | 33 | 33 | 30 | 28 | 28 | 0 | 0 | 1 | 0 | 0 |
| 4 | do. | do. | 4 | ..... | 33 | 33 | 33 | 31 | ..... | 2 | 2 | 2 | 3 |
| 5 | do. | do. | 4 | 33 | 33 | 33 | 33 | 33 | ..... | 1 | 1½ | 1½ | 2 |
| 6 | do. | do. | 3½ | 33 | 33 | 33 | 33 | 32 | 0 | 0 | 0 | ½ | 0 |
| 7 | do. | do. | 4 | 31 | 33 | 31 | ..... | ..... | 0 | 1 | 4 | ..... | ..... |
| 8 | do. | do. | 3 | 33 | 33 | 28 | 28 | 28 | 3 | 5 | 6 | 2 | ..... |
| 9 | Ireland | do. | 3½ | 33 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4 |
| 10 | do. | do. | 4 | ..... | 31 | 31 | 33 | 33 | ..... | 4 | 4 | 4 | 9 |
| 11 | do. | do. | 4½ | 33 | 30 | 30 | 27 | 27 | 0 | 0 | 0 | 0 | 0 |
| 12 | do. | do. | 5 | 33 | ..... | ..... | ..... | 33 | 2 | 3 | 3 | 3 | 3 |
| 13 | England | do. | 3 | 31 | 31 | 33 | 33 | 31 | 3½ | 6 | 6 | 6 | 6 |
| 14 | do. | do. | 7 | 33 | 33 | 33 | 33 | 33 | ..... | ..... | ..... | ..... | ..... |
| 15 | United States | do. | 4 | 31 | 33 | 33 | 33 | 33 | ..... | ..... | ..... | ..... | ..... |
| 16 | do. | do. | 3 | 33 | 33 | 33 | 33 | 33 | 1 | 1 | 2 | 2 | 2 |
| 17 | do. | do. | 3½ | ..... | 33 | 33 | 33 | 33 | 6 | 0 | 0 | 0 | 0 |
| 18 | | do. | 3 | 33 | 33 | 33 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment. | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 19 | United States. | Metal roofer. | 3 years. | 33 cts. | 33 cts. | 33 cts. | 33 cts. | 33 cts. | 0 months. | months. | 0 months. | 0 months. | months. |
| 20 | do. | do. | 4 | 22 | 25 | 28 | 33 | 33 | 6 | 3 | 0 | 0 | 0 |
| 21 | do. | do. | 1½ | 33 | 33 | 33 | 33 | ..... | 2 | 0 | 0 | 0 | ..... |
| 22 | do. | do. | 5½ | 33 | 33 | 33 | 33 | 28 | 0 | 0 | 2 | 0 | 2 |
| 23 | do. | do. | 4 | 33 | 33 | ..... | ..... | ..... | 1 | ..... | 0 | 0 | 0 |
| 24 | do. | do. | 4 | 33 | 33 | 33 | 31 | 31 | 0 | 0 | 0 | 0 | 0 |
| 25 | do. | do. | 5 | 33 | ..... | ..... | ..... | ..... | 6 | ..... | ..... | ..... | ..... |
| 26 | do. | do. | 5 | 37 | 37 | 37 | 33 | 31 | 0 | 0 | 0 | 1 | 0 |
| 27 | do. | do. | 3 | 28 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 28 | do. | do. | 4 | 33 | 33 | ..... | ..... | ..... | 0 | 0 | 0 | 0 | 0 |
| 29 | do. | do. | 4 | 25 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 30 | do. | do. | 4 | 33 | 33 | 33 | 33 | 33 | 2 | 2 | 2 | 2 | 3 |
| 31 | do. | do. | 5 | 33 | 33 | 33 | 31 | 31 | 0 | 0 | 0 | 0 | 0 |
| 32 | do. | do. | 3⅝ | 29 | 33 | 33 | 33 | ..... | 5 | 4 | 2 | 2 | ..... |
| 33 | do. | do. | 5 | 33 | 33 | 33 | 31 | 28 | 0 | 0 | 0 | 0 | 0 |
| 34 | do. | do. | 3¾ | 33 | 33 | 33 | 31 | 31 | 0 | 0 | 0 | 0 | 0 |
| 35 | do. | do. | 4 | 25 | 25 | 25 | 25 | 25 | 0 | 0 | 0 | 0 | 0 |
| 36 | do. | do. | 4 | 33 | 33 | 33 | 22 | 14 | 0 | 0 | 0 | ..... | ..... |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 37 | do. | do. | 4 | 33 | 33 | 30 | 30 | 30 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 38 | do. | do | 3 | 33 | 33 | 33 | 33 | 33 | | | 2½ | 2 | 2½ | 1¼ |
| 39 | do. | do. | 3 | 28 | 33 | 33 | 33 | 33 | 1 | | 3 | 3 | 3 | 3½ |
| 40 | do | do. | 3 | 33 | 33 | 33 | 33 | 33 | 1 | | 2 | 2 | | 2 |
| 41 | do. | do. | 3½ | 36 | 36 | 36 | 33 | 33 | 0 | | 0 | 0 | | 0 |
| 42 | do. | do. | 3½ | 37 | 36 | 33 | 33 | 31 | 0 | | 0 | 1½ | 1¼ | 2 |
| 43 | do. | do. | 4 | 25 | 25 | ..... | ..... | ..... | 6 | | 8 | ..... | ..... | ..... |
| 44 | do. | do | 5 | 25 | 25 | 33 | 33 | 30 | 6 | | 2 | 4 | 4 | 4 |
| 45 | do. | do. | 3½ | 33 | 33 | 33 | 33 | 33 | 2½ | | 2 | 2 | 1 | 1½ |
| 46 | do. | do. | 4 | 28 | 28 | ..... | ..... | ..... | ..... | | 2 | ..... | ..... | ..... |
| 47 | do. | do. | 3 | 33 | 33 | 25 | 25 | 25 | 3 | | ..... | ..... | ..... | ..... |
| 48 | do. | do. | 4 | 31 | ..... | ..... | ..... | ..... | ..... | | 2 | ..... | ..... | ..... |
| 49 | do. | do. | 3¾ | 33 | 33 | 33 | 33 | 31 | 0 | | 0 | 0 | 0 | 0 |
| 50 | do. | do. | 4 | 33 | 33 | 33 | 25 | 23 | 5 | | 2 | 4 | 5 | 2 |
| 51 | do. | do. | 4 | 33 | 33 | 33 | 33 | 33 | 0 | | ..... | ..... | ..... | ..... |
| 52 | do. | do. | 4 | 33 | 33 | 33 | 33 | 33 | ..... | | ..... | ..... | ..... | ..... |
| 53 | do. | do. | 3 | 28 | 28 | 28 | 28 | 28 | ..... | | ..... | ..... | ..... | ..... |
| 54 | do. | do. | 4 | 37 | 37 | 37 | 37 | 33 | 0 | | 0 | 0 | 0 | 0 |
| 55 | do. | do. | 3½ | 33 | 33 | 33 | ..... | ..... | 0 | | 0 | 0 | 0 | 0 |
| 56 | do. | do. | 4 | 29 | 29 | 29 | 29 | 29 | 2 | | ..... | ..... | ..... | ..... |
| 57 | do. | do. | 4 | 33 | 33 | 33 | ..... | ..... | 0 | | 0 | 0 | 0 | 0 |
| 58 | do. | do. | 4 | 28 | 28 | 28 | 28 | 28 | 0 | | 0 | 0 | 0 | 0 |
| 59 | do. | do. | 4 | 33 | 33 | 33 | 33 | 30 | 4½ | | ..... | ..... | ..... | ..... |
| 60 | do. | do. | 4 | 33 | 33 | ..... | ..... | ..... | 3 | | 4 | 0 | 0 | 0 |
| 61 | do. | do. | 4 | 28 | 28 | 28 | ..... | ..... | 3 | | 0 | 0 | ..... | ..... |
| 62 | do. | do | 3 | 33 | 33 | 33 | 33 | ..... | 3 | | 2 | 2 | 3 | 3 |
| 63 | do. | do. | 5 | 36 | 36 | 36 | 36 | 36 | 0 | | 0 | 0 | 0 | 0 |
| 64 | do. | do. | 4 | 33 | 33 | 33 | 33 | 31 | 2 | | ..... | ..... | ..... | ..... |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, If not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Germany, | Metal roofer, | Weekly, | $350 00 | | | | | United States, | No. |
| 2 | do. | do. | do. | | | | | | Germany, | No. |
| 3 | do. | do. | do. | | | | | | do. | No. |
| 4 | do. | do. | do. | | $650 00 | $650 00 | $650 00 | $625 00 | Germany & U. S., | No. |
| 5 | do. | do. | do. | | | | | | Germany, | No. |
| 6 | do. | do. | do. | 468 00 | 936 00 | 936 00 | 900 00 | 897 00 | do. | No. |
| 7 | do. | do. | do. | 200 00 | 450 00 | 300 00 | | | United States, | No. |
| 8 | do. | do. | do. | 210 00 | | | | | do. | No. |
| 9 | Ireland, | do. | do. | | | | | | do. | |
| 10 | do. | do. | do. | | 500 00 | 500 00 | 700 00 | 750 00 | | No. |
| 11 | do. | do. | do. | 468 00 | 936 00 | 936 00 | 936 00 | 936 00 | United States, | No. |
| 12 | do. | do. | do. | | | | | | do. | No. |
| 13 | England, | do. | do. | | | | | | do. | No. |
| 14 | do. | do. | do. | | | | | | England, | No. |
| 15 | United States, | do. | do. | | | | | | United States, | No. |
| 16 | do. | do. | do. | | | | | | do. | No. |
| 17 | do. | do. | do. | 0 | 936 00 | | | | do. | No. |
| 18 | do. | do. | Monthly, | 313 54 | | | | | do. | No. |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | .... | do. | ... | Weekly, ..... | ..... | ..... | ..... | ..... | ..... | do. ..... | No. |
| 20 | do. | .... | do. | ... | do. ..... | 0 | 225 00 | 300 00 | 375 00 | 400 00 | do. ..... | No. |
| 21 | do. | .... | do. | ... | do. ..... | 313 00 | 720 00 | 720 00 | 720 00 | ..... | do. ..... | No. |
| 22 | do. | ..... | do. | ... | do. ..... | ..... | ..... | ..... | ..... | ..... | do. ..... | No. |
| 23 | do. | ..... | do. | ... | do. ..... | 432 00 | 153 00 | ..... | ..... | ..... | do. ..... | No. |
| 24 | do. | ..... | do. | ... | do. ..... | ..... | ..... | 468 00 | ..... | ..... | do. ..... | No. |
| 25 | do. | ..... | do. | ... | do. ..... | 400 00 | 600 00 | ..... | ..... | ..... | do. ..... | No. |
| 26 | do. | ..... | do. | ... | do. ..... | 480 00 | 960 00 | 960 00 | 864 00 | 738 00 | do. ..... | No. |
| 27 | do. | ..... | do. | ... | do. ..... | ..... | ..... | ..... | ..... | ..... | do. ..... | No. |
| 28 | do. | ..... | do. | ... | do. ..... | ..... | ..... | ..... | ..... | ..... | do. ..... | No |
| 29 | do. | ..... | do. | ... | Semi-monthly, .. | ..... | ..... | ..... | ..... | ..... | do. ..... | No. |
| 30 | do. | ..... | do. | ... | Weekly, ..... | 300 00 | 600 00 | 600 00 | 600 00 | ..... | do. ..... | No. |
| 31 | do. | .... | do. | ... | do. ..... | 234 00 | 976 00 | 976 00 | 898 00 | 898 00 | do. ..... | No. |
| 32 | do. | ... | do. | ... | do ..... | 48 00 | 336 00 | 518 00 | 350 00 | ..... | do. ..... | No. |
| 33 | do. | .... | do. | ... | do. ..... | 432 00 | 864 00 | 864 00 | 792 00 | 720 00 | do. ..... | No. |
| 34 | do. | .... | do | ... | Semi-monthly, .. | ..... | ..... | ..... | ..... | ..... | do. ..... | No. |
| 35 | do. | .... | do. | ... | Weekly. ..... | 300 00 | 600 00 | 600 00 | 600 00 | 600 00 | do. ..... | No. |
| 36 | do. | .... | do. | ... | do. ..... | ..... | ..... | ..... | ..... | ..... | do. ..... | No. |
| 37 | do. | .... | do. | ... | do. ..... | ..... | ..... | ..... | ..... | ..... | do ..... | No. |
| 38 | do. | .... | do. | ... | do ..... | 350 00 | 675 00 | 660 00 | 650 00 | 600 00 | do. ... | No. |
| 39 | do. | .... | do. | ... | do. ..... | 250 00 | ..... | ..... | ..... | ..... | do. ..... | No. |
| 40 | do. | .... | do. | ... | do ..... | 250 00 | 500 00 | 500 00 | 500 00 | 500 00 | do. ..... | No. |
| 41 | do. | .... | do. | ... | do. ..... | 490 00 | 980 00 | 980 00 | 980 00 | 980 00 | do ..... | No. |
| 42 | do | .... | do. | ... | do ..... | 520 00 | 1001 16 | 819 72 | 816 75 | 753 30 | do. ..... | No |
| 43 | do. | .... | do. | ... | do .. .. | ..... | ..... | ..... | ..... | ..... | do. ..... | No. |
| 44 | do. | .... | do. | ... | do. ..... | 0 | 430 00 | 648 00 | 648 00 | 594 00 | do. ..... | Yes. |
| 45 | do. | .... | do. | ... | do. ..... | 266 87 | 356 04 | 330 47 | 356 09 | 221 69 | do ..... | No |
| 46 | do. | .... | do. | ... | do. ..... | .. ..... | ..... | ..... | ..... | ..... | do. ..... | No. |
| 47 | do. | .... | do. | ... | do. ..... | ..... | ..... | ..... | ..... | ..... | do. ..... | No |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 48 | United States, | Metal roofer, | Weekly, | $200 00 | $400 00 | $500 00 | $550 00 | $600 00 | United States, | No. |
| 49 | do. | do. | do. | 575 00 | ..... | ..... | ..... | ..... | do. | No. |
| 50 | do. | do. | do. | 72 00 | 600 00 | 500 00 | 125 00 | 500 00 | do. | No, |
| 51 | do. | do. | do. | 312 00 | 624 00 | 624 00 | 624 00 | 624 00 | do. | No. |
| 52 | do. | do. | do | ..... | ..... | ..... | ..... | ..... | do. | No, |
| 53 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 54 | do. | do. | do. | 520 00 | 1040 00 | 1040 00 | 1040 00 | 936 00 | do. | No. |
| 55 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 56 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 57 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 58 | do. | do. | do. | 350 00 | 700 00 | 700 00 | 700 00 | 700 00 | do. | No. |
| 59 | do. | do. | do. | 108 00 | ..... | ..... | ..... | ..... | do. | No. |
| 60 | do. | do. | do. | 198 00 | ..... | ..... | ..... | ..... | do. | No. |
| 61 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | Yes. |
| 62 | do. | do. | do. | 389 00 | 640 00 | 572 00 | 564 00 | 424 00 | do. | |
| 63 | do. | do. | do. | 546 00 | 1,092 00 | 1,092 00 | 1,092 00 | 1,092 00 | do. | No. |
| 64 | do. | do. | do. | 200 00 | ..... | ..... | ..... | ..... | do. | No. |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Germany, | Metal roofer | | | Yes. | No machinery, | | | 9 | No. | |
| 2 | do. | do. | | | do. | | | | 9 | No. | |
| 3 | do. | do. | | | do. | Yes. | No. | | 9 | No. | |
| 4 | do. | do. | Hour, | 33 per cent. more, | do. | No. | No. | | 9 | No. | |
| 5 | do. | do. | | | do. | | No. | | 9 | No. | |
| 6 | do. | do. | | | do. | No. | No. | | 9 & 10 | No. | |
| 7 | do. | do. | Hour. | | do. | No. | No. | | 9 | No. | |
| 8 | do. | do. | | | do. | No. | No. | | 9 | No. | |
| 9 | Ireland. | do. | Hour, | | do. | Yes. | Yes. | Lowered. | 9 | Yes, | No. |
| 10 | do. | do. | | | do. | Yes; 20 per cent. | No, | | 9 | No. | |
| 11 | do. | do. | | | do. | | | | 9 | No. | |
| 12 | do. | do. | | | do. | Yes. | Yes. | Lowered. | 9 | No. | |
| 13 | England, | do. | | | do. | Yes, | No. | | 9 | No. | |
| 14 | do. | do. | | | do. | Yes; 20 per cent., | No. | | 9 | No. | |
| 15 | United States, | do. | | | do. | No machinery. | | | 9 | No. | |
| 16 | do. | do. | | | do. | | | | 9 | No. | |
| 17 | do. | do. | Hour, | | do. | No, | No. | | 9 | No. | |
| 18 | do. | do. | | | do. | | Yes. | | 9 | No. | |

WORKMEN IN BUILDING TRADES.—PHILADELPHIA—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | United States. | Metal roofer. | ..... | ..... | Yes. | No machinery. | ..... | ..... | 9 | Yes. | No. |
| 20 | do. | do. | ..... | ..... | do. | ..... | No. | ..... | 9 | Yes. | No. |
| 21 | do. | do. | Hour. | ..... | do. | No. | No. | ..... | 8 & 9 | No. | |
| 22 | do. | do. | ..... | ..... | do. | No machinery. | ..... | ..... | 9 | No. | |
| 23 | do. | do. | ..... | ..... | do. | ..... | No. | ..... | 9 | No. | |
| 24 | do. | do. | Hour. | 120 per cent. more. | do. | No machinery. | ..... | ..... | 9 | No. | |
| 25 | do. | do. | Hour. | ..... | do. | No. | No. | ..... | 9 | No. | |
| 26 | do. | do. | ..... | ..... | do. | Yes; 75 per cent. | No. | ..... | 9 | No. | |
| 27 | do. | do. | ..... | ..... | do. | No. | No. | ..... | 9 | No. | |
| 28 | do. | do. | ..... | ..... | do. | No. | No. | ..... | 9 | No. | |
| 29 | do. | do. | ..... | ..... | do. | No. | ..... | ..... | 10 | No. | |
| 30 | do. | do. | ..... | ..... | do. | No. | No. | ..... | 9 | No. | |
| 31 | do. | do. | Hour. | ..... | do. | No. | No. | ..... | 9 | No. | |
| 32 | do. | do. | ..... | ..... | do. | Yes. | No. | ..... | 9 | No. | |
| 33 | do. | do. | Hour. | 35 per cent. more. | do. | No. | No. | ..... | 9 | Yes. | No. |
| 34 | do. | do. | ..... | ..... | do. | No. | No. | ..... | 9 | No. | |
| 35 | do. | do. | ..... | ..... | do. | No. | No. | ..... | 9 | No. | |
| 36 | do. | do. | Hour. | ..... | do. | ..... | No. | ..... | 10 | No. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 37 | do. | do. | ..... | ..... | do. | ..... | No, ..... | ..... | 9 | No. | |
| 38 | do. | do. | ..... | ..... | do. | Yes, 66 per cent. ..... | No. ..... | ..... | 9 & 10 | Yes. | No. |
| 39 | do. | do. | ..... | ..... | do. | No, ..... | No. ..... | ..... | 9 & 10 | No. | |
| 40 | do | do. | ..... | ..... | do. | No. ..... | No. ..... | ..... | 9 | No. | |
| 41 | do. | do. | ..... | ..... | do. | No machinery. ..... | No, ..... | ..... | 9 | No. | |
| 42 | do. | do. | ..... | ..... | do. | Yes. 10 per cent ..... | No, ..... | ..... | 9 | No. | |
| 43 | do. | do. | ..... | ..... | do. | No. ..... | No. ..... | ..... | 9 | No. | |
| 44 | do. | do. | ..... | No difference, ... | do. | No. ..... | No. ..... | ..... | 9 & 10 | No. | |
| 45 | do. | do. | Hour, .. | ..... | do. | No, ..... | ..... | ..... | 9 | No. | |
| 46 | do. | do. | ..... | ..... | do. | Yes, 50 per cent ..... | No. ..... | ..... | 9 | No. | |
| 47 | do. | do. | Hour. .. | ..... | do. | Yes. ..... | Yes. ..... | Lowered. ..... | 9 | No. | |
| 48 | do. | do. | ..... | ..... | do. | Yes. 20 per cent ..... | Yes. ..... | Lowered 50 per cent.. | 9 | No. | |
| 49 | do. | do. | ..... | ..... | do. | No, ..... | No. ..... | ..... | 9 | No. | |
| 50 | do. | do. | ..... | ..... | do. | No. ..... | No. ..... | ..... | 9 & 10 | No. | |
| 51 | do. | do. | Hour. .. | ..... | do. | No, ..... | No. ..... | ..... | 9 | No. | |
| 52 | do. | do. | ..... | ..... | do. | No, ..... | No. ..... | ..... | 9 | No. | |
| 53 | do. | do. | ..... | ..... | do | Yes, 10 per cent.. ..... | Yes. ..... | Lowered. ..... | 9 | No. | |
| 54 | do. | do | ..... | ..... | do | No machinery. ..... | No. ..... | ..... | 9 | No. | |
| 55 | do. | do. | ..... | ..... | do. | No, ..... | ..... | ..... | 9 | No. | |
| 56 | do. | do. | Hour, .. | ..... | do. | No. ..... | No. ..... | ..... | 9 | No. | |
| 57 | do. | do. | ..... | ..... | do. | No, ..... | No, ..... | ..... | 9 | No. | |
| 58 | do. | do. | ..... | ..... | do. | No, ..... | No. ..... | ..... | 9 | No. | |
| 59 | do. | do. | ..... | ..... | do. | No. ..... | No, ..... | ..... | 9 | No. | |
| 60 | do. | do. | ..... | ..... | do. | *Yes. ..... | Yes. ..... | ..... | 9 | No. | |
| 61 | do. | do. | Piece. .. | $3.50 per week more, | do. | Displaced 50 per cent. .. | No. ..... | ..... | 10 | No. | |
| 62 | do. | do. | ..... | ..... | do. | No, ..... | No. ..... | ..... | 9 | No | |
| 63 | do. | do. | ..... | ..... | do. | No. ..... | Yes. ..... | Raised. ..... | 9 | No. | |
| 64 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |

* Boys run the machines and thereby displace journeymen

## WORKMEN IN BUILDING TRADES.—ERIE.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Plumber, | Yes, | 25 cts. | 25 cts. | 22½ cts. | 20 cts. | 20 cts. | ..... | 4 months, | 2 months, | ..... | 4 months, |
| 2 | do. | do. | No, | 22½ | 22½ | 20 | 20 | 17½ | 2 months, | 0 | 0 | 0 months, | 0 |
| 3 | do. | do. | 3 years, | ..... | 20 | ..... | ..... | ..... | ..... | 3 | ..... | ..... | ..... |
| 4 | do. | do. | No, | 20 | 18 | ..... | ..... | ..... | 0 months, | 0 | 0 months. | 0 months. | ..... |
| 5 | do. | do. | 5 years, | 25 | 23 | 22 | 20 | 20 | 0 | 1 | 0 | 0 | 1 months, |
| 6 | do. | do. | 2 | 15 | 12½ | 10 | ..... | ..... | 0 | 0 | 0 | 0 | 0 |
| 7 | do. | do. | 6 | 25 | 20 | 20 | 20 | 20 | 1 | 1 | 1 | 1 | 0 |
| 8 | do. | do. | 4 | 25 | 25 | 25 | 25 | 25 | 1 | 1 | 0 | 2 | ½ |
| 9 | do. | do. | ..... | 23 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 10 | do. | do. | 4 years, | 25 | 25 | 25 | 22 | 20 | 3 months, | 2 months, | ..... | month, | ..... |
| 11 | do. | do. | No, | 15 | 15 | 15 | 15 | 15 | 0 | 0 | ..... | ..... | ..... |
| 12 | do. | do. | 4 years, | 25 | 25 | 25 | 25 | 20 | ..... | ..... | ..... | ..... | ..... |
| 13 | do. | do. | 2 | 15 | 12 | 8 | ..... | ..... | 0 months. | 0 months, | 0 months, | ..... | ..... |
| 14 | do. | do. | 2 | 25 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 15 | do. | do. | 3 | 30 | 30 | 30 | 30 | 30 | 0 months. | 0 months, | 0 months, | months, | 0 onths, |
| 16 | do. | do. | 3 | 20 | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... |
| 17 | do. | do. | 3 | 20 | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | do. . | do. . . . | 3 . . . | 13 . . | 13 . . | 13 . . | 10 . . | 10 . . | 0 . . | 0 | 0 | 0 | 0 |
| 19 | do. . | do. . . . | . . . . . | 13 . . | 13 . . | 10 . . | 8 . . | 8 . . | 0 . . | 0 | 0 | 0 | 0 |
| 20 | England, . . . | do. . . . | 3 years, . . . | 23 . . | 23 . . | 23 . . | . . . . . | . . . . . | 0 . . | 0 | 0 | . . . . . | . . . . . |

WORKMEN IN BUILDING TRADES.—ERIE—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, | Plumber, | Weekly, | | | | | | United States, | No. |
| 2 | do. | do. | do. | $99 00 | $775 00 | $600 00 | $600 00 | $525 00 | | No. |
| 3 | do. | do. | do. | 290 00 | | | | | United States, | No. |
| 4 | do. | do. | do. | 250 00 | | | | | | No. |
| 5 | do. | do. | do. | 360 00 | 660 00 | 680 00 | 600 00 | 550 00 | United States, | No. |
| 6 | do. | do. | do. | 222 00 | | | | | do. | No. |
| 7 | do. | do. | do. | | 360 00 | 350 00 | 340 00 | 550 00 | do. | No. |
| 8 | do. | do. | do. | | 360 00 | 350 00 | 340 00 | 330 00 | do. | |
| 9 | do. | do. | do. | 330 00 | | | | | | |
| 10 | do. | do. | do. | | | | | | United States, | No. |
| 11 | do. | do. | do. | 195 00 | 390 00 | 390 00 | 390 00 | 390 00 | | |
| 12 | do. | do. | do. | | | | | | | |
| 13 | do. | do. | do. | 189 00 | 364 00 | 260 00 | | | United States, | No. |
| 14 | do. | do. | do. | | | | | | do. | No. |
| 15 | do. | do. | do. | | | | | | do. | No. |
| 16 | do. | do. | do. | 240 00 | | | | | do. | No. |
| 17 | do. | do. | do. | 250 00 | | | | | do. | No. |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 18 | do | do | do | 210 00 | ..... | ..... | ..... | ..... | do | No |
| 19 | do | do | do | 195 00 | ..... | ..... | ..... | ..... | ..... | No. |
| 20 | England. | do | do | 340 00 | 670 00 | 670 00 | ..... | ..... | United States. | No. |

WORKMEN IN BUILDING TRADES.—ERIE.—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Plumber, | | | No, | Yes, | Yes, | Lowered, | 8 | No. | |
| 2 | do. | do. | Hour, | | No, | Yes, | No, | | 10 | No. | |
| 3 | do. | do. | | | Yes, | | | | 10 | No. | |
| 4 | do. | do. | | | Yes, | | | | 10 | | |
| 5 | do. | do. | Piece, | | No, | Yes, | Yes, | Lowered 50 per cent., | 10 | No. | |
| 6 | do. | do. | Hour, | 100 per cent. more, | Yes, | No | No, | | 10 | No. | |
| 7 | do. | do. | Piece, | | No, | | | | | | |
| 8 | do. | do. | | | No, | | | | | | |
| 9 | do. | do. | | | Yes, | | | | 10 | | |
| 10 | do. | do. | Hour, | | Yes, | | | | 10 | No. | |
| 11 | do. | do. | | | No. | | | | 10 | No. | |
| 12 | do. | do. | | | Yes, | | | | 10 | No. | |
| 13 | do. | do. | | | do. | | | | | | |
| 14 | do. | do. | | | do. | No, | No, | | 8 | No. | |
| 15 | do. | do. | Hour, | | do. | No, | No, | | 10 | No. | |
| 16 | do. | do. | | No difference, | do. | No, | No, | | 10 | No. | |
| 17 | do. | do. | | No difference, | do. | | | | 10 | No | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | .... | .... | |
| 19 | do. | do. | ..... | ..... | No, | ..... | ..... | ..... | .... | .... | |
| 20 | do. | do. | ..... | ..... | Yes, | No, ..... | No, ..... | ..... | 10 | No. | |

## WORKMEN IN BUILDING TRADES.—PITTSBURG.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Switzerland, | Carpenter, | 3 years, | 28 cts. | 31 cts. | 31 cts. | 31 cts. | 31 cts. | 0 months, | 0 months, | 0 months, | 0 months, | 0 months, |
| 2 | Ireland, | do. | 5 | 21 | 31 | 31 | 31 | 31 | 3 | 1 | 4 | 2 | 5 |
| 3 | Canada, | do. | 4 | 28 | 28 | 28 | 28 | 28 | 0 | 0 | 0 | 0 | 0 |
| 4 | Germany, | do. | 3 | 28 | 33 | 30 | 30 | 28 | 6 | 3 | 2 | 4 | 2 |
| 5 | do. | do. | 4 | 25 | 31 | 31 | 31 | 31 | 1 | 2 | 2 | 3 | 1 |
| 6 | Scotland, | do. | 5 | 22 | 31 | 31 | 31 | 31 | 2 | 5 | 0 | 0 | 2 |
| 7 | do. | do. | 5 | 26 | 31 | 32 | 32 | 32 | 3 | 0 | 0 | 2½ | 0 |
| 8 | do. | do. | 4 | 33 | 33 | 33 | 33 | 33 | 5¾ | 0 | 2 | 0 | 0 |
| 9 | do. | do. | 4 | 28 | 31 | 31 | 31 | 31 | 6 | 8 | 7 | 6 | 4 |
| 10 | Austria, | do. | 4 | ..... | ..... | 30 | 35 | 40 | ..... | ..... | ..... | ..... | ..... |
| 11 | United States, | do. | 3 | 19 | 31 | 31 | 31 | 31 | 3 | 4 | 2 | 3 | 0 |
| 12 | do. | do. | 3 | 25 | 28 | 31 | 31 | 31 | 0 | 0 | 0 | 2 | 0 |
| 13 | do. | do. | 4½ | 25 | 31 | 33 | 31 | 31 | 4½ | 6 | 1 | 6 | 6 |
| 14 | do. | do. | Yes, | 27 | 31 | 31 | 31 | 31 | 3 | ..... | ..... | ..... | ..... |
| 15 | do. | do. | 3 years, | 24 | 24 | 24 | 24 | 24 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | do. | do. | 2 | 25 | 25 | 25 | 25 | 25 | 25 | 24 | 54 | . . . . . | 1 | 1 | 1 |
| 17 | do. | do. | Yes. | 28 | 31 | 31 | 31 | 31 | 31 | 31 | 2 | 0 | 0 | 0 | 0 |
| 18 | do. | do. | No. | 22 | 31 | 31 | 31 | 31 | 31 | 31 | 4 | 4 | 4 | 4 | 4 |
| 19 | Germany, . . . | do. | 3 years, . . . | 25 | 31 | 31 | 31 | 31 | 31 | 31 | 24 | 0 | 0 | 0 | 0 |

WORKMEN IN BUILDING TRADES—PITTSBURG—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Switzerland, | Carpenter, | Semi-monthly, | ..... | ..... | ..... | ..... | ..... | Switzerland, | No. |
| 2 | Ireland, | do. | Weekly, | $149 87 | $528 00 | $528 00 | $660 00 | $460 00 | Ireland, | No. |
| 3 | Canada, | do. | do. | 429 00 | 858 00 | 858 00 | 858 00 | 858 00 | Canada, | No. |
| 4 | Germany, | do. | Semi-monthly, | 0 | ..... | ..... | ..... | ..... | Germany, | No. |
| 5 | do. | do. | do. | 158 00 | 548 00 | 660 00 | 600 00 | 700 00 | do. | No. |
| 6 | Scotland. | do. | Weekly, | 129 00 | 400 00 | 700 00 | 700 00 | 600 00 | Scotland, | No. |
| 7 | do. | do. | Semi-monthly, | 200 00 | 800 00 | 900 00 | 900 00 | 900 00 | do. | No. |
| 8 | do. | do. | do. | 15 00 | 780 00 | 577 00 | 656 00 | 924 00 | do. | No. |
| 9 | do. | do. | do. | 0 | 220 00 | 330 00 | 396 00 | 528 00 | United States, | No. |
| 10 | Austria, | do. | ..... | 0 | ..... | 300 00 | 600 00 | 1,000 00 | Europe, | Yes. |
| 11 | United States, | do. | Weekly and semi-monthly. | 145 25 | 550 00 | 687 50 | 550 00 | 761 75 | United States. | No. |
| 12 | do. | do. | Weekly, | 264 00 | 733 00 | 825 00 | 594 00 | 727 00 | do. | No. |
| 13 | do. | do. | Semi-monthly, | 77 50 | 270 00 | 803 00 | 395 00 | 400 75 | do. | No. |
| 14 | do. | do. | Weekly, | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 15 | do. | do. | Semi-monthly, | 300 00 | 700 00 | 700 00 | | 700 00 | do. | No. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | do. . . . . | do . . . | do. . | 20 00 | . . . . . | . . . . . | . . . . . | . . . . . | do . . . . | Yes |
| 17 | do. . . . . | do. . . . . | do. . | 145 00 | 825 00 | 840 00 | 840 00 | 840 00 | do. . . . . | No. |
| 18 | do. . . . . | do. . . . . | do. . | 200 00 | 600 00 | 600 00 | 600 00 | 600 00 | . . . . . | No. |
| 19 | Germany, . . . . . | do. . . . . | Weekly, . . . . . | 216 00 | 429 00 | 429 00 | 429 00 | 429 00 | Germany, . . . . . | No. |

WORKMEN IN BUILDING TRADES.—PITTSBURG—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Switzerland | Carpenter, | | | Yes, | No machinery, | | | 9 | Yes, | Yes, |
| 2 | Ireland, | do. | | | do. | Yes, 89 per cent., | | | 9 | No. | |
| 3 | Canada, | do. | | | do. | No, | | | 10 | Yes, | Yes, |
| 4 | Germany. | do. | | | do. | No machinery, | | | 9 | No. | |
| 5 | do. | do. | | | do. | | | | 9 | No. | |
| 6 | Scotland, | do. | Hour, | | do. | No machinery, | Yes, indirectly, | | 9 | Yes. | Yes. |
| 7 | do. | do. | | | do. | No machinery, | | | 9 | No. | |
| 8 | do. | do. | | | do. | No machinery, | Yes, in shops, | Lowered 50c. per day, | 9 | No. | |
| 9 | do. | do. | | | do. | Yes. | Yes, | Lowered, | 9 | Yes, | No. |
| 10 | Austria, | do. | Piece, | 17 per cent. more, | No, | No, | | | 9 | No. | |
| 11 | United States, | do. | Hour. | | Yes. | | Yes, | | 9 | No. | |
| 12 | do. | do. | | | do. | | | | 9 | Yes. | Yes. |
| 13 | do. | do. | | | do. | | | | 9 | No. | |
| 14 | do. | do. | | | do. | No machinery, | | | 9 | No. | |
| 15 | do. | do. | | | do. | No, | No, | | 10 | No. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | do. | do. | Piece, . . | 5 to 10 cents per hour more. | do. . | No, employs more men, . | No. . . . . | . . . . . | 9 | No. | |
| 17 | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 9 | Yes. | No. |
| 18 | do. | do. | . . . . . | . . . . . | | Yes, about 50 per cent. . . | Yes, . . . . . | Lowered, . . . . . | 9 | No, | |
| 19 | Germany, . . | do. | . . . . . | . . . . . | | Yes, about 25 per cent. . . | Yes. . . . . | Lowered about 15 per cent. | 9 | No. | |

## WORKMEN IN BUILDING TRADES.—MERCER COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment. | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Canada, | Carpenter, | 3 years, | cts., | 28 cts., | 25 cts., | 22 cts., | 22 cts., | 0 months, | 3 months, | 4 months, | ..... | 3 months, |
| 2 | United States, | do. | 10 | 25 | 28 | 25 | 25 | 25 | 3 | ..... | ..... | ..... | ..... |
| 3 | do. | do. | 5 | 28 | 28 | 25 | 25 | 22 | 2 | 2 | 1 | 1 month, | 1 |
| 4 | do. | do. | 4 | 25 | 28 | 25 | ..... | 24 | ..... | ..... | ..... | ..... | ..... |
| 5 | do. | do. | 3 | 17 | 25 | 26 | 23 | 23 | 3 | 2 | 1½ | 3 | 3 |
| 6 | do. | do. | 3 | 22 | 28 | 24 | 23 | 22 | 4 | 3 | 3 | 3 | 3 |
| 7 | do. | do. | 4 | 24 | 25 | 22 | 19 | 14 | 5 | 4 | 4 | 4 | 4 |
| 8 | do. | do. | 3 | 33 | 28 | 33 | 33 | 33 | 0 | 0 | 0 | 0 | 0 |
| 9 | do. | do. | 2 | 28 | 28 | 24 | 24 | 22 | 3 | 4 | 4 | 4 | 4 |
| 10 | do. | do. | 3 | 20 | 25 | 30 | 35 | 35 | 4 | 2 | 0 | 0 | ..... |
| 11 | do. | do. | 3 | 25 | 27 | 25 | 22 | 19 | 5 | 5 | 8 | 7 | 6 |
| 12 | do. | do. | 3 | 25 | 25 | 25 | 25 | 25 | 4 | 5 | 3 | 4 | 3 |
| 13 | do. | do. | No, | 28 | 28 | 24 | 24 | 24 | ..... | ..... | ..... | ..... | ..... |
| 14 | do. | do. | 2 | 22 | 22 | 22 | 22 | 19 | 1 | 4 | 4 | 4 | 4 |
| 15 | do. | do. | 3 | 19 | 25 | 25 | 28 | 28 | 5 | 4 | 5 | 6 | 6 |
| 16 | do. | do. | 1 | 28 | 28 | 27 | 23 | 16 | 2 | 0 | 1 | 2 | 0 |
| 17 | do. | do. | 2 | 28 | 28 | 25 | 25 | 24 | 6 | 3 | 3 | 3 | 3 |
| 18 | do. | do. | 5 | 22 | 28 | 25 | 24 | 24 | ..... | ..... | ..... | ..... | ..... |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | do. | 2 | 25 | 28 | 28 | 25 | 25 | 5 | 2 | 2 | 2 | 2 |
| 20 | do. | do. | 3 | 19 | 25 | 28 | 24 | 22 | 5½ | 6 | 3 | 4 | 7 |
| 21 | do. | do. | 2 | 28 | 28 | 28 | 24 | 24 | 4 | ..... | ..... | ..... | ..... |
| 22 | do. | do. | 2 | 23 | 23 | 25 | 25 | 22 | 0 | 3 | 5 | 4 | 0 |
| 23 | do. | do. | No, | 36 | 36 | 36 | 36 | 36 | 3 | 2 | 2 | 1 | 0 |
| 24 | do. | do. | Yes, | 28 | 28 | 28 | 28 | 25 | 3 | 0 | 0 | 0 | 0 |
| 25 | do. | do. | 5 years, | 33 | * | ..... | ..... | ..... | ..... | 0 | 3 | 4 | ..... |
| 26 | do. | do. | 3 | 15 | 23 | 23 | 23 | ..... | ..... | ..... | ..... | ..... | ..... |
| 27 | do. | do. | No, | 22 | 28 | 28 | 33 | 39 | 0 | 0 | 0 | 0 | 0 |
| 28 | do. | do. | 3 years, | 20 | 23 | 15 | 10 | ..... | ..... | ..... | ..... | ..... | ..... |
| 29 | do. | do. | 4 | 25 | 25 | 25 | 25 | 25 | 2 | 2 | 1 | 1 | 2 |
| 30 | do. | do. | 4 | 28 | 22 | 19 | 14 | ..... | 0 | 2 | ..... | ..... | ..... |
| 31 | do. | do. | 3 | 28 | 25 | 25 | 23 | 22 | 5 | 4 | 3 | 1 | 1 |
| 32 | do. | do. | 1 | 20 | 22½ | 22½ | 22½ | 22½ | ..... | ..... | ..... | ..... | ..... |
| 33 | do. | do. | 3 | 20 | 20 | 20 | 20 | 25 | 3 | 2 | 2 | 5 | 3 |
| 34 | do. | do. | 2½ | 25 | 22 | 22 | 22 | 20 | 4 | 4 | 4½ | 3 | 5 |
| 35 | do. | do. | 3 | 20 | 23 | 23 | 23 | 23 | 4 | 6 | 6 | 6 | 6 |
| 36 | do. | do. | 3 | 17 | 19 | 11 | ..... | ..... | 4 | 4 | 4 | ..... | ..... |
| 37 | do. | do. | 3 | 28 | 28 | 28 | 33 | 33 | ..... | ..... | ..... | ..... | ..... |

* Contract.

WORKMEN IN BUILDING TRADES.—MERCER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly. | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Canada, | Carpenter, | Semi-monthly, | $0 | $500 00 | $400 00 | $400 00 | $400 00 | United States, | |
| 2 | United States, | do. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | No. |
| 3 | do. | do. | Semi-monthly, | 240 00 | ..... | ..... | ..... | ..... | United States, | No. |
| 4 | do. | do. | do. | 65 00 | 195 00 | 260 00 | 200 00 | 150 00 | do. | No. |
| 5 | do. | do. | do. | 120 00 | 468 00 | 500 00 | 400 00 | 400 00 | do. | |
| 6 | do. | do. | do. | 100 00 | 600 00 | 600 00 | 600 00 | 600 00 | do. | Sometimes, |
| 7 | do. | do. | do. | 48 00 | 468 00 | 416 00 | 364 00 | 260 00 | do. | No. |
| 8 | do. | do. | do. | 425 00 | 750 00 | 850 00 | 850 00 | 850 00 | do. | No. |
| 9 | do. | do. | do. | 125 00 | 600 00 | 650 00 | 550 00 | 500 00 | do. | No. |
| 10 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | |
| 11 | do. | do. | do. | 20 00 | 375 00 | 200 00 | 225 00 | 250 00 | do. | No. |
| 12 | do. | do. | do. | 117 00 | 450 00 | 526 00 | 468 00 | 526 00 | do. | No. |
| 13 | do. | do. | Weekly, | 125 00 | 550 00 | 450 00 | ..... | ..... | ..... | No. |
| 14 | do. | do. | Semi-monthly, | 120 00 | 450 00 | 400 00 | 400 00 | 200 00 | United States, | |
| 15 | do. | do. | do. | 30 00 | 150 00 | 175 00 | 200 00 | 250 00 | do. | Sometimes. |
| 16 | do. | do. | do. | 250 00 | 720 00 | 680 00 | 500 00 | 440 00 | do. | |
| 17 | do. | do. | do. | ..... | 560 25 | 500 00 | 530 60 | 525 75 | do. | No. |
| 18 | do. | do. | do. | 252 00 | 631 83 | 359 10 | 581 80 | 450 82 | do. | No. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | |
| 20 | do. | do. | do. | 20 00 | 300 00 | 400 00 | 350 00 | 300 00 | do. | ..... | Sometimes. |
| 21 | do. | do. | do. | 88 29 | 648 15 | 714 92 | ..... | ..... | do. | ..... | |
| 22 | do | do. | do. | 190 00 | 400 00 | 350 00 | 400 00 | 500 00 | do. | ..... | No. |
| 23 | do. | do. | do. | 118 74 | 709 25 | 768 24 | 755 80 | 887 24 | ..... | ..... | No. |
| 24 | do. | do. | do. | 100 00 | 750 00 | 700 00 | 700 00 | 700 00 | United States, | ..... | No. |
| 25 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do. | ..... | Yes. |
| 26 | do. | do. | ..... | 250 00 | 650 00 | 720 00 | 675 00 | ..... | do. | ..... | No. |
| 27 | do. | do. | Weekly, | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 28 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 29 | do. | do. | Weekly, | 200 00 | 400 00 | 450 00 | 450 00 | 350 00 | do. | ..... | No. |
| 30 | do. | do. | Semi-monthly, | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 31 | do. | do. | do. | 60 00 | 100 00 | 180 00 | 300 00 | 300 20 | do. | ..... | No. |
| 32 | do. | do | Woekly, | 200 00 | 550·00 | 550 00 | 650 00 | 550 00 | do. | ..... | No. |
| 33 | do | do | do. | 100 00 | 140 00 | 99 00 | 75 00 | 150 00 | do. | ..... | No |
| 34 | do | do. | Semi-monthly, | 80 00 | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 35 | do | do. | ..... | 70 00 | 75 00 | 100 00 | 100 00 | 100 00 | do. | ..... | Yes. |
| 36 | do | do | ..... | 70 00 | 270 00 | 191 00 | ..... | ..... | do. | ..... | No. |
| 37 | do | do | Semi-monthly, | ..... | ..... | ..... | ..... | ..... | do | ..... | No. |

WORKMEN IN BUILDING TRADES.—MERCER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen. If so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Canada, | Carpenter, | | | Yes, | Yes; 33 per cent., | Yes, | Lowered 33 per cent., | 9 | Yes. | No. |
| 2 | United States, | do. | Hour, | | | | | | 9 | No. | |
| 3 | do. | do | | | Yes, | Yes; 50 per cent., | Yes, | | 9 | Yes, | No. |
| 4 | do. | do. | Hour, | | do. | No, | No, | | 9 | Yes, | Yes. |
| 5 | do. | do. | | | do. | Yes; 20 per cent., | | | 9 | No. | |
| 6 | do. | do. | Piece, | 20 per cent. more, | do. | Yes; 50 per cent., | Yes, | Lowered, | 9 | No. | |
| 7 | do. | do. | | | do. | Yes, | Yes, | | 9 | No. | |
| 8 | do. | do. | | | do. | No, | | | 9 | Yes, | No. |
| 9 | do. | do. | Hour, | | do. | Yes; 33 per cent., | No, | | 9 | Yes, | No. |
| 10 | do. | do. | | | do. | Yes; 50 per cent., | Yes, | Lowered 33 per cent., | 9 | Yes, | No. |
| 11 | do. | do. | Hour, | | do. | | | | 9 | No. | |
| 12 | do. | do. | | | do. | No. | Yes, | Lowered, | 9 | Yes, | Yes. |
| 13 | do. | do. | | | do. | Yes; 50 per cent., | Yes, | Lowered about 20 p.c., | 9 | Yes, | No. |
| 14 | do. | do. | | | do. | Yes, | No, | | 9 | Yes, | No. |
| 15 | do. | do. | Piece. | | do. | No, | Yes, | | 8 | Yes, | No. |
| 16 | do. | do. | | | do. | No. | No, | | 9 | Yes. | No. |
| 17 | do | do. | | | do. | Yes; 50 per cent., | Yes, | | 9 | Yes. | |
| 18 | do. | do. | Hour, | | do. | Yes; 33 per cent. | Yes, | Lowered 33 per cent., | 9 | Yes, | No. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | do. | ..... | ..... | do. | Yes; 33 per cent. | No. | ..... | 9 | Yes. | No. |
| 20 | do. | do. | Hour. | ..... | do. | Yes. | Yes. | Lowered. | 9 | No. | |
| 21 | do. | do. | ..... | ..... | do. | Yes; 50 per cent. | Yes. | do. | 9 | No. | |
| 22 | do. | do. | ..... | ..... | do. | No. | No. | ..... | 9 | No. | |
| 23 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 9 | No. | |
| 24 | do. | do. | ..... | No difference. | do. | No | No. | ..... | 9 | Yes. | No. |
| 25 | do. | do. | Piece. | ..... | do. | ..... | Yes. | Lowered 33 per cent. | 9 | Yes. | No. |
| 26 | do. | do. | do. | About 25 p. c. more. | do. | ..... | Yes. | Lowered. | 10 | No. | |
| 27 | do. | do. | Hour. | ..... | do. | No. | No. | ..... | 9 | | |
| 28 | do. | do. | ..... | ..... | do. | No. | Yes. | Lowered 33 per cent. | 9 & 10 | No. | |
| 29 | do. | do. | ..... | ..... | do. | No. | No. | ..... | 8 & 10 | No. | |
| 30 | do. | do. | ..... | ..... | do. | ..... | Yes. | ..... | 9 | No. | |
| 31 | do. | do. | Hour. | ..... | do. | ..... | ..... | ..... | 9 | Yes. | No. |
| 32 | do. | do. | ..... | ..... | No. | Yes; 50 per cent. | ..... | ..... | 10 | Yes. | No. |
| 33 | do. | do. | Hour. | ..... | No. | Yes. | Yes. | Lowered 25 per cent. | 10 | Yes. | No. |
| 34 | do. | do. | ..... | ..... | Yes. | Yes. | Yes. | ..... | 9 | Yes. | No. |
| 35 | do. | do. | ..... | ..... | ..... | Yes. | Yes. | ..... | 10 | Yes. | Yes. |
| 36 | do. | do. | Hour. | ..... | Yes. | ..... | ..... | ..... | 9 | No. | |
| 37 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | 9 | No. | |

## WORKMEN IN BUILDING TRADES.—BLAIR COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States. | Carpenter. | 3 years. | 25 cts. | 25 cts. | 25 cts. | 25 cts. | 25 cts. | 2 months. | 2 months. | ..... | ..... | ..... |
| 2 | do. | do. | 2 | 20 | 20 | ..... | ..... | ..... | 6 | 5 | 5 months. | 5 months. | 5 months. |
| 3 | do. | do. | Yes. | 17 | 25 | 25 | ..... | ..... | ..... | 0 | 0 | 0 | 0 |
| 4 | do. | do. | 3 years. | 23 | 28 | 28 | 30 | 30 | 4 | 4 | ..... | ..... | ..... |
| 5 | do. | do. | 5 | 22 | 22 | 23 | 23 | 21 | 0 | 6 | 9 | 6 | 0 |
| 6 | do. | do. | 3 | 20 | 23 | 28 | 25 | 25 | 4 | 6 | 0 | 3 | 3 |
| 7 | do. | do. | 3 | 18 | 20 | 20 | 25 | 20 | 3 | 2 | 4 | 3 | 3 |
| 8 | do. | do. | 3 | 18 | 20 | 16 | 12½ | 10 | 2 | 3 | 3 | ..... | 3 |
| 9 | do. | do. | No. | 18¾ | 17½ | 18 | ..... | ..... | 5¼ | 2 | 0 | ..... | ..... |
| 10 | do. | do. | 3 years. | 15 | 15 | 20 | 20 | 20 | 5½ | 3 | 4 | 4 | 4 |
| 11 | do. | do. | 3 | 20 | 25 | 25 | 28 | 20 | 3 | 0 | 0 | 6 | 4 |
| 12 | do. | do. | 3 | 20 | 20 | 20 | 20 | ..... | ..... | ..... | ..... | ..... | ..... |
| 13 | do. | do. | 4 | 20 | 20 | 30 | 20 | 20 | 2 | 3 | 4 | 4 | 4 |
| 14 | do. | do. | 3 | 20 | 23 | * | * | * | 3¼ | 3 | 4 | 2 | 4 |
| 15 | do. | do. | 3 | 23 | 23 | 24 | 25 | 25 | 2 | 2 | 2 | 1 | 1 |
| 16 | do. | do. | 3 | 20 | 25 | 28 | * | 33 | 4 | 0 | 0 | 0 | 0 |
| 17 | do. | do | 4 | 20 | 25 | 23 | 23 | 20 | ..... | ..... | ..... | ..... | ..... |

* Contract.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | do. | do. | 3 | 15 | 23 | 23 | 23 | * | 3 | 2 | 2 | ..... | | |
| 19 | do. | do. | 4 | ..... | 17 | 17 | 17 | 17 | 6 | 6 | 0 | 0 | 0 | |
| 20 | do. | do. | 4 | 21 | 25 | 25 | 25 | 20 | 2 | 2 | ..... | ..... | ..... | |
| 21 | do. | do. | 3 | 24 | 28 | 27 | 23 | 18 | 1 | 3 | 3½ | 3 | 3 | |
| 22 | do. | do. | No. | ..... | 20 | 20 | 20 | 18 | ..... | 0 | 4 | 4 | 4 | |
| 23 | do. | do. | 4 years. | 30 | * | * | * | * | 4 | 2 | 2 | 2 | 2 | |
| 24 | do. | do. | 3 | 21 | 20 | 17 | 16 | 15 | 3½ | 1½ | 2 | 1 | ..... | |
| 25 | do. | do. | 4 | 22 | 22 | 22 | 20 | 20 | 0 | 1 | 1 | ..... | ..... | |
| 26 | do. | do. | Yes. | 22 | 22 | 22 | 22 | 20 | ..... | ..... | ..... | ..... | ..... | |
| 27 | do. | do. | 3 years. | 20 | 20 | 15 | 15 | 15 | 4 | 4 | 4 | 4 | 4 | |
| 28 | do. | do. | 3 | 20 | 25 | 25 | 25 | 25 | 3 | 3 | 3 | 3 | 3 | |
| 29 | do. | do. | 3 | * | 25 | 25 | 25 | 25 | 0 | ..... | ..... | ..... | ..... | |
| 30 | do. | do. | 5 | ..... | 20 | 20 | 20 | 20 | 6 | ..... | ..... | ..... | ..... | |
| 31 | do. | do. | 2 | 22 | 26 | 25 | 25 | 22 | 3 | 0 | 0 | 0 | 0 | |
| 32 | do. | do. | No. | 17 | 21 | 21 | 21 | 21 | 3½ | 1 | 0 | 0 | ..... | |
| 33 | do. | do. | No. | 17 | 22 | 25 | 28 | 28 | 1 | 0 | 0 | 0 | 0 | |
| 34 | do. | do. | 3½ | 18 | 17 | 15 | 10 | 8 | 3 | 2 | 3 | 2 | 4 | |
| 35 | do. | do. | 3 | 19 | 22½ | ..... | ..... | ..... | 4 | 1 | ..... | ..... | ..... | |
| 36 | do. | do. | No. | 21½ | 25 | 27½ | 25 | 20 | 4 | 3½ | 1 | 1 | 3 | |
| 37 | do. | do. | 1 | 20 | 25 | 25 | 25 | 17½ | 4 | 5 | 2 | 2 | 3 | |
| 38 | do. | do. | 3 | 18 | 18 | 20 | 22½ | 25 | 3 | 4 | 7 | 8 | ..... | |
| 39 | do. | do. | 3 | 23 | 20 | 25 | 30 | 30 | ..... | 6 | ..... | 0 | 0 | |
| 40 | do. | do. | 3 | ..... | ..... | ..... | ..... | ..... | 4 | 0 | 0 | 0 | 0 | |
| 41 | do. | do. | No. | 12 | 12 | 15 | 15 | 20 | 3 | 3 | 3 | 3 | 0 | |
| 42 | do. | do. | 5 | 18 | 18 | 12 | 18 | 18 | 2 | 2 | 2 | 2 | ..... | |
| 43 | do. | do. | 3 | 20 | 20 | 25 | 22½ | 25 | 3 | 3 | 1 | 1 | 1 | |
| 44 | do. | do. | 2 | 22 | 22 | 22 | 20 | 20 | 2 | 4 | ..... | ..... | ..... | |
| 45 | do. | do. | 4 | 15 | 20 | 25 | 30 | 30 | 6 | 3 | 0 | 0 | 0 | |

* Contract.

WORKMEN IN BUILDING TRADES.—BLAIR COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship. If so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 46 | United States, | Carpenter, | 6 years, | 20 cts. | 20 cts. | 25 cts. | 25 cts. | 25 cts. | 6 months, | 11 months | 10 months | 3 months, | 3 months. |
| 47 | do. | do. | 3 | 25 | 25 | 25 | 20 | 20 | 3½ | 1 | 2 | 3 | 1 |
| 48 | do. | do. | 4 | 17 | 20 | 23 | 25 | 25 | 5 | 7 | 5 | 1 | 1 |
| 49 | do. | do. | 2 | 17 | 18 | 15 | ..... | ..... | 4 | 4 | ..... | ..... | ..... |
| 50 | do. | do. | Yes. | 22 | 23 | 25 | 25 | 25 | ½ | 3¾ | ..... | ..... | ..... |
| 51 | do. | do. | 3 | 20 | 22 | 18 | 15 | 15 | 1½ | ..... | ..... | ..... | ..... |
| 52 | do. | do. | No, | 18 | 25 | 25 | 23 | 20 | 4 | 5 | ..... | ..... | ..... |
| 53 | do. | do. | 3 | 20 | 25 | 25 | 23 | 20 | 3 | 4 | 4 | 4 | 3½ |
| 54 | do. | do. | 3 | 30 | 30 | 25 | 25 | 25 | 0 | 3 | 1 | ..... | ..... |
| 55 | do. | do. | 3 | 19 | 25 | 23 | 22 | 22 | 3 | ..... | 3 | 3 | 3 |
| 56 | do. | do. | Yes, | * | * | * | * | * | 2 | 4 | 3 | 3½ | ..... |
| 57 | do. | do. | 4 | 24 | ..... | ..... | ..... | ..... | 3 | ..... | ..... | ..... | ..... |
| 58 | do. | do. | 3 | 18 | 22 | 35 | 17½ | 15 | 6 | 5 | 3 | 5 | 2 |
| 59 | do. | do. | 3 | 20 | 19 | 24 | 24 | 61 | 5 | 8 | 4 | | 3 |
| 60 | do. | do. | 3 | 25 | 25 | 25 | 23 | 02 | 5 | ..... | 0 | 4 | 4 |
| 61 | do. | do. | 6 | 17 | 18 | 18 | 18 | 18 | 5 | 4 | 3 | 3 | 3 |
| 62 | do. | do. | 3 | 19 | 20 | 25 | 17 | 20 | 4 | ..... | 5 | ..... | ..... |

* Contract.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *63 | do. | do. | 3 | ... | ... | ... | ... | ... | ... | ... | 0 | 0 | 0 | 0 |
| 64 | do. | do. | 4 | ... | 22 | 27 | 27 | 29 | ... | 0 | 0 | 0 | 0 | 0 |
| 65 | do. | do. | 4 | ... | 19 | 19 | 19 | 19 | 19 | 2½ | 3½ | 2 | 2 | 2 |
| 66 | do. | do. | 3 | ... | 35 | 35 | 25 | 25 | 25 | 4 | 1 | 0 | 3 | 3 |
| 67 | do. | do. | 2 | ... | 24 | 25 | 25 | 23 | 21 | 3 | 1 | 1 | 1 | 1½ |
| 68 | do. | do. | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 69 | do. | do. | 4 | ... | 20 | 25 | 25 | 25 | 25 | 3 | 6 | 6 | 6 | 6 |
| 70 | do. | do, | 4 | ... | 20 | 25 | 25 | 25 | 20 | 5½ | 4½ | 6 | 3 | 3½ |
| 71 | do. | do. | 3 | ... | 30 | 30 | 25 | 19 | 19 | 2 | 2 | 2 | 2 | 3 |
| 72 | do. | do. | 3 | ... | 18 | 20 | 20 | 20 | 19 | 6 | 4 | 4 | 2 | 3 |
| 73 | do, | do. | 3 | ... | 20 | 21 | 22 | 20 | 20 | 2 | 0 | 1 | 2 | 1 |
| 74 | Ireland. | do. | 3 | ... | 20 | 20 | 20 | 20 | 20 | ... | ... | ... | ... | ... |

*Contractor.

WORKMEN IN BUILDING TRADES.—BLAIR COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, | Carpenter, | Monthly, | ..... | ..... | ..... | ..... | ..... | United States, | ..... |
| 2 | do. | do. | Semi-monthly, | $0 00 | $155 00 | $240 00 | $240 00 | $200 00 | do. | No. |
| 3 | do. | do. | Monthly, | 150 00 | ..... | ..... | ..... | ..... | do. | No. |
| 4 | do. | do. | Semi-monthly, | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 5 | do. | do. | Monthly, | 240 00 | 240 00 | 360 00 | 310 00 | 600 00 | do. | Sometimes. |
| 6 | do. | do. | do. | 90 00 | 350 00 | 800 00 | 600 00 | 600 00 | do. | No. |
| 7 | do. | do. | do. | 100 00 | ..... | ..... | ..... | ..... | do. | |
| 8 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 9 | do. | do. | ..... | 50 00 | 100 00 | 200 00 | ..... | ..... | ..... | No. |
| 10 | do. | do. | Monthly, | 20 00 | 75 00 | 110 00 | 150 00 | 100 00 | United States, | No. |
| 11 | do. | do. | ..... | 60 00 | 500 00 | 500 00 | 250 00 | 250 00 | do. | Sometimes. |
| 12 | do. | do | ..... | 30 00 | 200 50 | 300 00 | ..... | ..... | do. | Sometimes. |
| 13 | do. | do. | ..... | 10 00 | 50 00 | 70 00 | 70 00 | 70 00 | do. | No. |
| 14 | do. | do. | ..... | 82 50 | 375 00 | 660 00 | 850 00 | 900 00 | do. | |
| 15 | do. | do. | Monthly, | ..... | ..... | ..... | ..... | ..... | do. | Sometimes. |
| 16 | do. | do. | Semi-monthly, | 70 00 | ..... | ..... | ..... | ..... | do. | No. |
| 17 | do. | do. | ..... | 142 00 | 423 00 | 375 00 | 400 00 | ..... | do. | No. |
| 18 | do. | do. | Monthly, | 150 00 | 500 00 | 600 00 | 500 00 | 400 00 | do. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | do. | do. | 0 00 | 25 00 | 200 00 | 300 00 | 300 00 | do. | No. |
| 20 | do. | do. | ..... | 187 00 | 311 50 | 548 00 | 540 75 | 380 00 | do. | Sometimes. |
| 21 | do. | do. | ..... | 229 90 | 663 46 | 603 70 | 540 85 | 444 40 | do. | No. |
| 22 | do. | do. | Monthly, | ..... | ..... | ..... | ..... | ..... | ..... | Sometimes. |
| 23 | do | do. | do. | 160 00 | 700 00 | 650 00 | 600 00 | 600 00 | United States, | Sometimes. |
| 24 | do. | do. | do. | 50 00 | 426 00 | 353 00 | 350 00 | 338 00 | do. | No. |
| 25 | do. | do. | do | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 26 | do. | do. | do. | 213 41 | 611 23 | 609 79 | 532 14 | 336 44 | do. | No |
| 27 | do. | do. | do. | 100 00 | 400 00 | 300 00 | 300 00 | 300 00 | do. | |
| 28 | do. | do. | Weekly, | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 29 | do. | do. | Monthly, | ..... | ..... | ..... | ..... | ..... | do. | |
| 30 | do. | do. | Weekly, | 0 | 450 00 | 475 00 | 480 00 | ..... | do. | |
| 31 | do. | do. | Monthly, | 102 50 | 600 00 | 600 00 | 600 00 | 550 00 | do. | No. |
| 32 | do. | do. | do. | 30 00 | 300 00 | 300 00 | ..... | ..... | ..... | No. |
| 33 | do. | do. | do. | 200 00 | 350 00 | 375 00 | 380 00 | 390 00 | ..... | Sometimes. |
| 34 | do. | do. | do. | 120 00 | 250 00 | 190 00 | 160 00 | ..... | United States, | No. |
| 35 | do. | do. | do. | 96 71 | ..... | ..... | ..... | ..... | do. | No. |
| 36 | do. | do. | do. | 368 13 | 673 26 | 500 00 | 479 49 | 450 00 | ..... | No. |
| 37 | do. | do. | Semi-monthly, | 75 00 | ..... | ..... | ..... | ..... | United States, | Sometimes. |
| 38 | do. | do. | Monthly, | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 39 | do. | do. | Weekly & monthly, | ..... | 500 00 | 650 00 | 700 00 | 700 00 | do. | No. |
| 40 | do. | do. | Monthly, | 150 00 | 960 00 | 960 00 | 960 00 | 960 00 | do. | |
| 41 | do. | do. | ..... | 130 00 | 310 00 | 390 00 | 435 00 | 300 00 | ..... | No. |
| 42 | do. | do. | Monthly, | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 43 | do. | do. | do. | 150 00 | 150 00 | 175 00 | 200 00 | 250 00 | do. | No. |
| 44 | do. | do. | do | 160 87 | 480 00 | 480 00 | 540 00 | 480 00 | do | No. |
| 45 | do. | do. | do. | 0 | 468 00 | 780 00 | 936 00 | 936 00 | do. | Yes. |
| 46 | do. | do. | do | 0 | ..... | ..... | ..... | ..... | do. | Sometimes. |
| 47 | do. | do. | ..... | 125 00 | 700 00 | 500 00 | 400 00 | 450 00 | do | Sometimes. |

WORKMEN IN BUILDING TRADES.—BLAIR COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 48 | United States, | Carpenter. | Monthly, | $30 00 | $300 00 | $450 00 | $650 00 | $650 00 | United States, | No. |
| 49 | do. | do. | | 75 00 | 400 00 | 175 00 | | | do. | No. |
| 50 | do. | do. | | 50 00 | 302 40 | 302 40 | | | do. | No. |
| 51 | do. | do. | Monthly, | 154 20 | | | | | do. | No. |
| 52 | do. | do. | | 50 00 | 390 15 | | | | do. | No. |
| 53 | do. | do. | | 120 00 | 250 00 | 300 00 | 350 00 | 350 00 | do. | No. |
| 54 | do. | do. | Monthly, | | | | | | do. | No. |
| 55 | do. | do. | do. | 95 02 | 450 00 | 422 11 | 382 00 | 361 61 | do. | No. |
| 56 | do. | do. | | 160 00 | 600 00 | 585 00 | 325 00 | | do. | Yes. |
| 57 | do. | do. | | | | | | | do. | Yes. |
| 58 | do. | do. | Weekly, | | | | | | do. | No. |
| 59 | do. | do. | Semi-monthly, | 80 00 | 40 00 | 60 00 | 200 00 | 250 00 | do. | Sometimes. |
| 60 | do. | do. | Monthly. | 50 00 | 66 50 | 135 00 | | | do. | No. |
| 61 | do. | do. | | 90 00 | 180 00 | 210 00 | 220 00 | 230 00 | do. | No. |
| 62 | do. | do. | | 50 00 | | | | | do. | No. |
| *63 | do. | do. | Contract, | | | | | | do. | Yes. |
| 64 | do. | do. | Monthly, | 625 00 | 800 00 | 800 00 | 800 00 | 800 00 | do, | No. |

*Contractor.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 65 | do. | do. | Quarterly. | 50 00 | 100 00 | 150 00 | 150 00 | 150 00 | do. | No. |
| 66 | do. | do. | Monthly, | 200 00 | 600 00 | ..... | ..... | ..... | do. | No. |
| 67 | do. | do. | ..... | 209 75 | 645 48 | 677 36 | 587 37 | 535 00 | do. | No. |
| 68 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 69 | do. | do. | Semi-monthly, | 300 00 | ..... | ..... | ..... | ..... | do. | No. |
| 70 | do. | do. | Monthly, | 54 00 | 360 00 | 360 00 | 275 00 | 325 00 | do. | No. |
| 71 | do, | do. | Semi-monthly, | 340 00 | 240 00 | 150 00 | 200 00 | 175 00 | do. | No. |
| 72 | do. | do. | Monthly, | 0 00 | ..... | ..... | ..... | ..... | do. | No. |
| 73 | do. | do. | do. | 167 30 | 532 15 | 488 30 | ..... | ..... | do. | No. |
| 74 | Ireland, | do. | do. | 300 00 | ..... | ..... | ..... | ..... | do. | Yes. |

WORKMEN IN BUILDING TRADES.—BLAIR COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States. | Carponter, | . . . . . | . . . . . | Yes, . | No. . . . . | No, . . . . . | . . . . . | 10 | Yes, . | No. |
| 2 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | Yes. |
| 3 | do. | do. | Hour, . . | . . . . . | do. . | . . . . . | Yes, . . . . . | Lewered wages, . . . . | 10 | No. | |
| 4 | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | . . . . . | . . . . . | 10 | No. | |
| 5 | do. | do. | Hour, . . | 10 per cent. more, . | do, . | Yes; 25 per cent., . . . . | No, . . . . . | . . . . . | 10 | No. | |
| 6 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | Yes, . . . . . | Lowered wages, . . . | 10 | Yes, . | Yes. |
| 7 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | Yes. |
| 8 | do. | do. | Piece, . . | 25 per cent. more, . | do. . | Yes; 25 per cent., . . . . | Yes; laborers, . . . | Lowered 25 per cent., | 10 | No. | |
| 9 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 10 | do. | do. | . . . . . | . . . . . | . . . . | . . . . . | Yes, . . . . . | Lowered 33 per cent., | 10 | No. | |
| 11 | do. | do. | Piece, . . | 33 per cent. more. . | Yes, . | Yes; 50 per cent., . . . . | Yes, . . . . . | Lowered 40 per cent., | 10 | No. | |
| 12 | do. | do. | Piece. . . | 33 per cent. more. . | do. . | Yes; 50 per cent., . . . . | . . . . . | . . . . . | 10 | No. | |
| 13 | do. | do. | Piece, . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 10 | . . . . | |
| 14 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | Yes, . . . . . | Lewered 50 per cent.. | 9 & 10 | Yes, . | Yes. |
| 15 | do. | do. | Piece, . . | . . . . . | do. . | Yes; 66 per cent.. . . . . | Yes, . . . . . | Lowered 40 per cent., | 10 | Yes, . | Yes. |
| 16 | do. | do. | Hour, . . | . . . . . | do. . | Yes, . . . . . | Yes. . . . . | Lowered 25 per cent., | 10 | No. | |
| 17 | do. | do. | . . . . . | . . . . . | do. . | Yes, . . . . . | Yes. . . . . | Lewered 20 per cent., | 10 | . . . . | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | do. | do. | . . . . . | * | do. . | Yes; 50 per cent.. . . . . | Yes, . . . . . | Lowered $1.25 per day. | 10 | Yes, . | Yes. |
| 19 | do | do. | . . . . . | . . . . . | do . | Yes; 50 per cent., . . . . | No, . . . . . | . . . . . | 10 | No. | |
| 20 | do | do. | Piece, . . | 75 cent to $1.00 per day more. | do. . | Yes: 50 per cent.. . . . . | Yes, . . . . . | Lowered 100 per cent., | 10 | No. | |
| 21 | do. | do. | . . . . . | . . . . . | No, . | . . . . . | Yes. . . . . | Lowered 40 per cent., | 9 & 10 | No. | |
| 22 | do | do. | Piece, . , | 50 cent per day more | Yes, . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 23 | do. | do. | Piece. . . | 50 per cent. more, . | do. . | No, . . . . . | No, . . . . . | . . . . . | 10 | No. | |
| 24 | do. | do. | . . . . . | . . . . . | do. . | No machinery, . . . . . | . . . . . | . . . . . | 10 | Yes, . | Yes. |
| 25 | do. | do. | . . . . . | . . . . . | No. . | No, . . . . . | No, . . . . . | . . . . . | 10 | Yes. . | Yes. |
| 26 | do. | do. | Hour, . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 27 | do | do. | Piece, . . | 16 per cent. more, . | No, . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | Yes. |
| 28 | do | do. | Hour. . . | . . . . . | Yes, . | Yes, . . . . . | Yes, . . . . . | Lowered 25 per cent., | 8 & 10 | No. | |
| 29 | do. | do. | Piece, . . | . . . . . | do. . | . . . . . | Yes. . . . . | Lowered 25 per cent., | 10 | No. | |
| 30 | do. | do. | Hour, . . | . . . . . | do. . | Yes; 50 per cent., . . . . | Yes, . . . . . | . . . . . | 10 | No. | |
| 31 | do. | do. | Piece, . | 25 per cent. more. . | Yes. . | Yes, . . . . . | Yes, . . . . . | Lowered 25 per cent., | 10 | Yes, . | Yes. |
| 32 | do | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | Yes. |
| 33 | do. | do. | Piece, . | $1.00 per day more, | do. . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 34 | do. | do. | . . . . . | . . . . . | do. . | Yes; 50 per cent., . . . . | Yes, . . . . . | Lowered 25 per cent., | 10 | No. | |
| 35 | do | do. | . . . . . | . . . . . | do. . | Yes; 50 per cent.. . . . . | Yes, . . . . . | Lowered, . . . . . | 10 | No. | |
| 36 | do | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | Yes. |
| 37 | do. | do. | Piece. . | 25 to 50 per cent. more, | No, . | . . . . . | Yes, . . . . . | Lowered, . . . . . | 10 | No. | |
| 38 | do | do. | . . . . . | . . . . . | do . | . . . . . | . . . . . | . . . . . | 10 | Yes. . | Yes. |
| 39 | do | do. | . . . . . | . . . . . | Yes, . | Yes; about 50 per cent., . | Yes, . . . . . | Lowered 50 per cent., | 10 | Yes, . | Yes |
| 40 | do | do. | Piece, . | 33 per cent. more, . | No, . | Yes: about 33 per cent., . | Yes, . . . . . | . . . . . | 10 | Yes, . | Yes. |
| 41 | do. | do | Hour, . . | . . . . . | Yes. . | Yes: about 50 per cent., . | Yes. . . . . | Lowered 35 per cent., | 10 | Yes, . | Yes. |
| 42 | do | do | Hour, . . | 50 per cent. more, . | No, . | Yes; about 75 per cent., . | . . . . . | . . . . . | 10 | No. | |
| 43 | do | do. | Piece, . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 10 | Yes, . | Yes. |
| 44 | do. | do. | . . . . . | . . . . . | Yes. | No, . . . . . | No. . . . . | . . . . . | 10 | Yes, . | Yes |

* Make more at piece work but will shorten life ten years

WORKMEN IN BUILDING TRADES.—BLAIR COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | United States. | Carpenter, | Piece. | . . . . . | yes. | Yes; many, . . . . . | No. . . . . | . . . . . | 10 | No. | |
| 46 | do. | do. | Piece, | . . . . . | do. | Yes; 33 per cent., . . . . . | Yes, . . . . . | Lowered 33 por cent., | 10 | No. | |
| 47 | do. | do. | . . . . . | No difference. . . . | do. | No, . . . . . | No, . . . . . | . . . . . | 10 | No. | |
| 48 | do. | do. | . . . . . | . . . . . | do. | . . . . . | Yes, . . . . . | Lowered 25 per cent., | 10 | No. | |
| 49 | do. | do. | Piece. | 50 cts. per day more. | do. | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 50 | do. | do. | Piece. | 100 per cent. more, | do. | . . . . . | Yes, . . . . . | Lowered, . . . . . | 10 | Yes, | No. |
| 51 | do. | do. | Piece, | . . . . . | do. | . . . . . | Yes, . . . . . | Lowered, . . . . . | 10 | No. | |
| 52 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 53 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 54 | do. | do. | . . . . . | . . . . . | No, | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 55 | do. | do. | . . . . . | . . . . . | Yes. | . . . . . | Yes, . . . . . | . . . . . | 10 | No. | |
| 56 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 10 | Yes, | Yes. |
| 57 | do. | do. | . . . . . | . . . . . | No. | Yes, . . . . . | Yes, . . . . . | . . . . . | 10 | No. | |
| 58 | do | do. | Hour. . . | 11 per cent. more, | Yes. | Yes; many, . . . . . | Yes. . . . . | Lowered 30 per cent., | 10 | No. | |
| 59 | do. | do. | . . . . . | No difference. . . . | do. | Yes. . . . . | No, . . . . . | . . . . . | 10 | No. | |
| 60 | do. | do. | . . . . . | No difference. . . . | No, | Yes, . . . . . | Yes, . . . . . | Lowered 66 per cent., | 10 | Yes, | Yes. |
| 61 | do. | do. | Hour, . . | . . . . . | Yes. | Yes; 25 per cent., . . . . | Yes. . . . . | Lowered 25 per cent.. | 10 | No. | |
| 62 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 10 | No. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 63* | do. | do. | Piece. | 25 per cent. more, | Yes. | Yes; 50 per cent., | No. | ..... | 10 | Yes, | Yes. |
| 64 | do. | do. | ..... | ..... | do. | Yes, | Yes. | Lowered. | 10 | No. | |
| 65 | do. | do. | ..... | ..... | do. | Yes; 80 per cent., | do. | Lowered 50 per cent., | .... | .... | |
| 66 | do. | do. | Piece, | ..... | No, | ..... | ..... | ..... | 10 | Yes, | Yes. |
| 67 | do. | do. | ..... | ..... | Yes. | Yes, | ..... | ..... | 10 | No. | Yes, |
| 68 | do. | do. | ..... | ..... | do. | ..... | ..... | ..... | 10 | No. | |
| 69 | do. | do. | ..... | ..... | .... | ..... | ..... | ..... | .... | .... | .... |
| 70 | do. | do. | Day, | ..... | Yes. | ..... | No, | ..... | 10 | Yes, | |
| 71 | do. | do. | Hour, | 50 cts. per day more, | do. | No. | No, | ..... | 10 | No. | |
| 72 | do. | do. | ..... | ..... | do. | No, | No, | ..... | 10 | Yes, | No. |
| 73 | do. | do. | ..... | ..... | do. | No, | No, | ..... | 10 | Yes. | Yes. |
| 74 | do. | do. | ..... | ..... | do. | Yes. | ..... | ..... | 10 | Yes, | Yes. |

*Contractor.

## WORKMEN IN BUILDING TRADES.—CAMBRIA COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Germany, | Carpenter, | Yes, | 18 cts. | 20 cts. | 21 cts. | 22 cts. | 23 cts | 2 months, | ..... | ..... | ..... | ..... |
| 2 | United States, | do. | ½ year. | 20 | 20 | 18 | 18 | 18 | 3 | 3 months, | 3 months, | 3 months, | 3 months, |
| 3 | do. | do. | Yes, | 20 | ..... | ..... | ..... | ..... | 0 | 2 | 6 | 3 | 6 |
| 4 | do. | do. | 2 years, | 21 | 23 | 23 | 20 | 20 | 2 | ..... | 1 | 1 | 1 |
| 5 | do. | do. | No, | 22 | 25 | 28 | 28 | 28 | 1 | ..... | 5 | ..... | 3 |
| 6 | England, | do. | 7 years, | 21 | 25 | 25 | 25 | 25 | 3 | ..... | ..... | ..... | ..... |
| 7 | United States, | do. | Yes, | 17 | 20 | 20 | 22 | 25 | 4 | 4 | 4 | 4 | 4 |
| 8 | Germany, | do. | 2 years, | 15 | 17 | 15 | 13 | 10 | 2 | 1 | 1 | 1 | 1 |
| 9 | United States, | do. | No, | 23 | 25 | 22 | 22 | 30 | 1 | 1 | ½ | 2 | 2 |
| 10 | do | do. | No, | ..... | 20 | 20 | 20 | ..... | 5 | ..... | ..... | ..... | ..... |
| 11 | do. | do. | ..... | 15 | 15 | 10 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 12 | do. | do. | 3 years, | 19 | 19 | 19 | 20 | 20 | 4 | 4 | 4 | 4 | 4 |
| 13 | England, | do. | 5 years, | 20 | 25 | 25 | 25 | 20 | 3 | 2 | 1 | ..... | ..... |
| 14 | United States, | do. | Yes, | 13 | 20 | 20 | 20 | 20 | 2 | 3 | ..... | ..... | ..... |
| 15 | do. | do. | No, | 19 | 22 | 21 | 21 | 21 | 2½ | 3 | 2 | 1½ | ..... |
| 16 | do. | do. | 3½ years, | 21 | 20 | 22 | 23 | 21 | ..... | 4 | ..... | ..... | ..... |
| 17 | do. | do. | 3 years, | 20 | 20 | 20 | 20 | 20 | 3 | ..... | ..... | ..... | 4 |
| 18 | do. | do. | 3 years, | 20 | 20 | 20 | 23 | 23 | 2 | ..... | ..... | ..... | ..... |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do | do. | 3 years, | 20 | 25 | * | * | * | 8 | | | | | |
| 20 | do. | do. | 3 years, | 18 | 20 | 22 | 22 | 23 | | | | | | |
| 21 | do. | do. | No. | 20 | 21 | 21 | | | 4 | 11¾ | 3 | | | |
| 22 | do. | do. | 4 years, | 22 | 22 | 22 | 25 | 25 | 0 | | | | | |
| 23 | do. | do. | 5 years, | 17 | 18 | 22 | 26 | 27 | 1 | | | | | |
| 24 | do | do. | 2 years, | 20 | 20 | 22 | 23 | 22 | 6 | 3 | | | | |
| 25 | do. | do. | 4 years. | 20 | 23 | 20 | 20 | 20 | | | | | | |
| 26 | do. | do. | 3 years, | 15 | 15 | | | | | 5 | | | | |
| 27 | do. | do. | 1½ years. | 20 | 20 | 20 | 22 | 23 | 0 | | 3 | | | |
| 28 | do. | do. | 3 years, | 25 | 25 | 25 | 25 | 25 | 0 | | | | | |
| 29 | do. | do. | 1 year, | 23 | 22 | 20 | 20 | 23 | 2 | 5 | 5 | 5 | 2 | |
| 30 | Germany | do. | | 21 | 21 | | | | | | | | | |
| 31 | United States, | do. | 6 | 25 | | | | | | | | | | |
| 32 | do. | do. | 2 | 16 | 20 | 20 | | | 0 | 12 | | | | |
| 33 | do. | do. | | 18 | 21 | 22 | 23 | 24 | 4 | | | | 8 | |
| 34 | do | do. | 4 | 17 | 20 | 20 | 22 | 22 | | | | | | |

* Contract

WORKMEN IN BUILDING TRADES.—CAMBRIA COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly, or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Germany, | Carpenter, | Semi-monthly | $100 00 | | | | | United States, | No. |
| 2 | United States, | do. | Semi-monthly, | 150 00 | $300 00 | $324 00 | $324 00 | $324 00 | do. | No. |
| 3 | do. | do. | Weekly, | 300 00 | 370 00 | 300 00 | 320 00 | 200 00 | do. | No. |
| 4 | do. | do. | Monthly, | 165 00 | 643 50 | 643 50 | 572 00 | 572 00 | do. | No. |
| 5 | do. | do. | Semi-monthly, | | | | | | | Pleee. |
| 6 | England, | do. | Semi-monthly, | 120 00 | | | | | England, | No. |
| 7 | United States, | do. | | | | | | | United States, | No. |
| 8 | Germany. | do. | | 105 00 | 408 00 | 375 00 | 310 00 | 260 00 | do. | |
| 9 | United States, | do. | Monthly, | 294 75 | 725 00 | 666 00 | 540 00 | 720 00 | | No. |
| 10 | do. | do. | Monthly, | 85 00 | 523 60 | 546 30 | 518 50 | 518 50 | | No. |
| 11 | do. | do. | Semi-monthly, | | | | | | | No. |
| 12 | do. | do. | Weekly. | | | | | | United States, | |
| 13 | England, | do. | Monthly, | 154 00 | | | | | England, | No. |
| 14 | United States, | do. | Semi-monthly, | 112 70 | | | | | United States, | |
| 15 | do. | do. | Semi-monthly, | 101 95 | 450 00 | 400 00 | 450 00 | 500 00 | | No. |
| 16 | do. | do. | | 300 00 | 400 00 | 600 00 | 600 00 | 625 00 | United States, | No. |
| 17 | do. | do. | Weekly. | 180 00 | | | | | do. | No. |
| 18 | do. | do. | Monthly, | 101 90 | 547 50 | 557 80 | | | do. | No. |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | do. | Weekly, | 150 00 | ..... | ..... | ..... | ..... | do. | Yes. |
| 20 | do. | do. | Monthly, | 120 00 | 400 00 | 575 00 | 650 00 | 700 00 | do. | No. |
| 21 | do. | do. | W'kly & semi-m'ly. | 134 72 | 15 90 | 114 80 | ..... | ..... | ..... | No. |
| 22 | do. | do. | Weekly, | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 23 | do. | do. | Monthly, | 170 00 | ..... | ..... | ..... | ..... | do. | No. |
| 24 | do. | do. | Semi-monthly, | 0 00 | 228 00 | 437 00 | 573 00 | 578 00 | do. | No. |
| 25 | do. | do. | Semi-monthly. | 257 00 | 630 00 | ..... | ..... | ..... | do. | No |
| 26 | do. | do. | Semi-monthly, | 175 00 | 250 00 | ..... | ..... | ..... | do. | Yes. |
| 27 | do. | do. | Weekly, | 250 00 | 500 00 | 250 00 | 450 00 | 500 00 | do. | No. |
| 28 | do. | do. | Weekly, | 360 00 | 600 00 | 600 00 | 600 00 | 600 00 | do. | No. |
| 29 | de | do. | ..... | 225 00 | 275 00 | 300 00 | 375 00 | 525 00 | do. | Sometimes. |
| 30 | Germany, | do. | Semi-monthly, | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 31 | United States. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do | No. |
| 32 | do. | do. | Monthly, | ..... | ..... | ..... | ..... | ..... | do. | No |
| 33 | do. | do. | do. | 40 00 | ..... | ..... | ..... | ..... | do. | No. |
| 34 | do. | do. | do | ..... | ..... | ..... | ..... | ..... | do. | No. |

WORKMEN IN BUILDING TRADES.—CAMBRIA COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn the most, working by the piece, hour or day? | If there is a difference state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Germany, . . . | Carpenter, | . . . . . | . . . . . | No, . | No machinery. . . . . | No, . . . . . | . . . . . | 10 | Yes, . | No. |
| 2 | United States. | do. | . . . . . | . . . . . | Yes, . | No, . . . . . | Yes, . . . . . | Lowered, . . . . . | 10 | No. | |
| 3 | do. | do. | Piece, . . | $60 per month more, | . . . . | Yes, . . . . . | Yes. . . . . | . . . . . | 10 | Yes, . | No. |
| 4 | do. | do. | Hour, . . | . . . . . | No, . | Yes, 33 per cent., . . . . | No, . . . . . | . . . . . | 10 | Yes, . | Yes. |
| 5 | do. | do. | Piece, . . | 33 per cent. more, . | Yes, . | . . . . . | Yes, . . . . . | Lowered 25 per cent., | 10 | No. | |
| 6 | England, . . . | do. | Piece, . . | 25 to 75c per day more, | . . . . | No, . . . . . | Yes, . . . . . | Lowered. . . . . | 10 | No. | |
| 7 | United States, | do. | Hour. . . | . . . . . | Yes, . | No, . . . . . | No, . . . . . | . . . . . | 10 | Yes, . | No. |
| 8 | Germany, . . . | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 9 | United States, | do. | . . . . . | . . . . . | do. . | Yes. . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 10 | do. | do. | . . . . . | . . . . . | do. . | Yes, . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 11 | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | No, . . . . . | . . . . . | 10 | No. | |
| 12 | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | . . . . . | . . . . . | 10 | No. | |
| 13 | England, . . . | do. | . . . . . | . . . . . | do. . | Yes, 50 per cent., . . . . . | Yes, . . . . . | Lowered 30 per cent., | 10 | No. | |
| 14 | United States, | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 15 | do. | do. | . . . . . | . . . . . | No, . | No, . . . . . | No. . . . . | . . . . . | 10 | Yes, . | No. |
| 16 | do. | do. | Piece, . . | . . . . . | Yes, . | Yes, . . . . . | Yes, . . . . . | 50 cents per day, . . . | 10 | Yes, . | No. |
| 17 | do. | do. | . . . . . | . . . . . | do. . | No, . . . . . | Yes, . . . . . | Lowered, . . . . . | 10 | Yes, . | No. |
| 18 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 10 | No. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | do. | Piece, . . | . . . . . | do. . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 20 | do. | do. | Hour, . . | . . . . . | do. . | No. . . . . | No, . . . . . | . . . . . | 10 | Yes, . | Yes. |
| 21 | do. | do. | . . . . . | . . . . . | No, . | Yes, . . . . . | . . . . . | . . . . . | 10 | No. | |
| 22 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | Yes, . . . . . | Lowered, . . . . . | 10 | Yes, . | No. |
| 23 | do. | do. | . . . . . | . . . . . | do. . | No. . . . . | No, . . . . . | . . . . . | 10 | No | |
| 24 | do. | do. | . . . . . | . . . . . | No. . | Yes, 50 per cent., . . . . | Yes, . . . . . | Lowered. . . . . | 10 | No. | |
| 25 | do. | do. | . . . . . | . . . . . | Yes, . | No, . . . . . | Yes, . . . . . | Lowered, . . . . . | 10 | | |
| 26 | do. | do. | . . . . . | Very little difference, | do. . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 27 | do. | do. | . . . . . | . . . . . | do. . | No. . . . . | No, . . . . . | . . . . . | 10 | Yes, . | Yes. |
| 28 | do. | do. | . . . . . | . . . . . | do. . | Yes, very few, . . . . . | No, . . . . . | . . . . . | 10 | Yes, . | No. |
| 29 | do. | do. | Piece, . . | 50c to $1 per day more | No, . | Yes, . . . . . | Yes, . . . . . | Lowered 20 per cent., | 10 | No. | |
| 30 | Germany, . . . | do. | . . . . . | . . . . . | No, | No. . . . . | No, . . . . . | . . . . . | 10 | No. | |
| 31 | United States, | do. | Piece, . . | . . . . . | Yes, . | Yes, 33 per cent., . . . . | Yes, . . . . . | . . . . . | 10 | No. | |
| 32 | do. | do. | Hour, . . | 50 cents per day, . . | do. . | Yes, 20 per cent., . . . . | Yes, . . . . . | Lowered 45 cts. p. d., | 10 | No. | |
| 33 | do. | do. | . . . . . | . . . . . | do. . | . . . . . | No, . . . . . | . . . . . | 8, 9, 10 | Yes, . | No |
| 34 | do. | do. | Hour, . . | 50 to 75 cts. per day, | do. . | Yes, . . . . . | Yes, . . . . . | Lowered 50 to 75 cents per day. | 10 | No. | |

## WORKMEN IN BUILDING TRADES.—WESTMORELAND COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship. If so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Carpenter, | 4 years, | 22 cents, | 25 cents, | 25 cents, | 25 cents, | 25 cents, | 3 months, | 3 months, | 2 months, | ..... | ..... |
| 2 | do. | do. | 3 | 28 | 28 | 28 | 25 | 25 | 1 | 4 | 6 | ..... | ..... |
| 3 | do. | do. | Yes, | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 4 | do. | do. | 3 | 28 | 28 | 33 | 33 | 33 | 6 | 6 | 6 | ..... | ..... |
| 5 | do. | do. | 3 | 20 | 25 | 25 | 20 | 25 | 2 | 4 | ..... | ..... | ..... |
| 6 | do. | do. | 3 | 25 | 28 | 28 | 28 | 28 | ..... | ..... | 1 | 1 month. | 1 month. |
| 7 | do. | do. | 3 | 28 | 28 | 33 | 33 | 33 | 6 | 6 | 6 | ..... | ..... |
| 8 | do. | do. | 5 | 20 | 25 | 30 | 22 | 25 | 4 | 3 | 5 | 4 | 3 |
| 9 | do. | do. | 3 | 20 | 25 | 25 | 20 | 14 | 5 | ..... | ..... | ..... | ..... |
| 10 | do | do. | 3 | 20 | 25 | 25 | 25 | 22 | 0 | 1½ | 1 | ..... | ..... |
| 11 | do. | do. | 3 | 25 | 28 | 28 | 28 | 28 | 1 | 1 | 1½ | 1 | 2 |
| 12 | do. | do. | No, | 23 | | 25 | 25 | 25 | 4 | 3 | 3 | ..... | ..... |
| 13 | do. | do. | No, | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 14 | do. | do. | 3 | 23 | 25 | 25 | 25 | 25 | 2½ | 9 | 1 | ..... | ..... |
| 15 | do. | do. | 2 | * | * | * | * | ..... | 6 | 6 | 3 | 2 | 2 |
| 16 | do. | do. | 5 | 20 | 25 | 25 | ..... | ..... | 2 | 1 | 2 | ..... | ..... |

* Contractor.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | do. | do. | 3 | ... | ..... | 25 | 25 | 28 | 25 | ..... | 3 | 4 | ..... | ..... |
| 18 | do. | do. | 3 | ... | 25 | 25 | 20 | 20 | 20 | 1 | 1 | ..... | ..... | ..... |
| 19 | do. | do. | 3 | ... | 25 | 25 | 25 | 25 | 20 | 4 | 4 | 4 | 4 | 4 |
| 20 | do. | do. | 3 | ... | 18 | 19 | 17 | 14 | ..... | 6 | 6 | 12 | 4 | ..... |
| 21 | do. | do. | 3 | ... | 22 | 25 | 25 | 25 | 22 | ..... | ..... | ..... | ..... | ..... |
| 22 | do. | do. | 3 | ... | 19 | 31 | 28 | 28 | 23 | 51 | 8 | 2 | 1 | 1 |

WORKMEN IN BUILDING TRADES.—WESTMORELAND COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, | Carpenter, | Weekly, | ..... | ..... | ..... | $540 00 | $590 00 | United States, | No. |
| 2 | do. | do. | do. | $300 00 | $480 00 | $360 00 | 540 00 | 540 00 | do. | No. |
| 3 | do. | do. | ..... | 375 00 | 960 00 | 974 00 | 925 00 | 725 00 | do. | |
| 4 | do. | do. | Semi-monthly, | 0 00 | ..... | ..... | ..... | ..... | do. | Sometimes. |
| 5 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 6 | do. | do. | Semi-monthly, | 260 00 | 290 00 | 290 00 | 275 00 | 275 00 | do. | No. |
| 7 | do. | do. | do. | 0 00 | ..... | ..... | ..... | ..... | do. | Sometimes. |
| 8 | do. | do. | do. | 50 00 | 106 00 | 65 00 | 105 00 | 48 00 | do. | No. |
| 9 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 10 | do. | do. | Semi-monthly, | 219 85 | 490 75 | 362 45 | 552 00 | 439 98 | do. | No. |
| 11 | do. | do. | do. | 225 00 | 600 00 | 550 00 | 565 00 | 525 00 | do. | |
| 12 | do. | do. | Weekly and semi-monthly. | 90 00 | 400 00 | 450 00 | 550 00 | 625 00 | ..... | No. |
| 13 | do. | do. | Weekly, | ..... | ..... | ..... | ..... | ..... | ..... | No. |
| 14 | do. | do. | Semi-monthly, | 200 00 | 600 00 | 700 00 | 1,000 00 | 1,200 00 | United States, | Sometimes. |
| 15 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do. | Yes. |
| 16 | do. | do. | ..... | 154 80 | 940 00 | 945 00 | 945 00 | 945 00 | do. | No. |
| 17 | do. | do. | Weekly and semi-monthly. | 0 00 | 534 45 | 489 70 | 610 50 | 469 72 | do. | No. |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | do. | . . . . | do. | . . . . | Semi-monthly. . . | 280 00 | 569 25 | 455 40 | 461 75 | 448 00 | do. | |
| 19 | do. | . . . . | do. | . . . . | Weekly. . . . . | 29 50 | 320 00 | 200 00 | 375 00 | 275 00 | do | |
| 20 | do. | . . . . | do. | . . . . | do . . . . . | 0 00 | . . . . | . . . . | . . . . | . . . . | do | No |
| 21 | do. | . . . . | do. | . . . . | do. . . . . | 268 00 | 536 00 | 536 00 | 536 00 | 536 00 | do | No. |
| 22 | do. | . . . . | do. | . . . . | Semi-monthly. . . | 12 00 | 585 00 | 500 00 | 540 00 | 650 00 | do | Sometimes |

WORKMEN IN BUILDING TRADES.—WESTMORELAND COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much? | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen. If so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Carpenter, | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 9 | Yes, | No. |
| 2 | do. | do. | Piece. . . | 33 per cent. more, | do. | No, . . . . . | No, . . . . . | . . . . . | 9 | Yes. | No. |
| 3 | do. | do. | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | 9 | Yes, | No. |
| 4 | do. | do. | Piece, . . | 20 per cent. more, | Yes, | No, . . . . . | Yes. . . . . | Raised wages. . . . . | 9 | No. | |
| 5 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 8 & 9 | Yes. | No. |
| 6 | do. | do. | . . . . . | . . . . . | do. | . . . . . | No, . . . . . | . . . . . | 8 & 9 | Yes. | No. |
| 7 | do. | do. | Piece. . . | 20 per cent. more, | do. | No, . . . . . | Yes, . . . . . | Raised wages, . . . . | 9 | No. | |
| 8 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 9 | Yes, | No. |
| 9 | do. | do. | . . . . . | . . . . . | do. | . . . . . | No, . . . . . | . . . . . | 9 | Yes, | No. |
| 10 | do. | do. | Hour. . . | . . . . . | No. | No. . . . . | No. . . . . | . . . . . | 8 & 9 | Yes, | No. |
| 11 | do. | do. | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 8 & 9 | Yes, | No. |
| 12 | do. | do. | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | 9 | Yes, | No. |
| 13 | do. | do. | . . . . . | . . . . . | Yes. | No, . . . . . | No, . . . . . | . . . . . | 9 | Yes, | No. |
| 14 | do. | do. | Piece, . . | . . . . . | . . . . | . . . . . | No, . . . . . | . . . . . | 9 | Yes. | Yes. |
| 15 | do. | do. | Piece, . | 25 per cent. more, | Yes, | . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 16 | do. | do. | . . . . . | . . . . . | No, | . . . . . | Yes, . . . . . | Raised wages, . . . . | 8 & 9 | Yes, | No. |
| 17 | do. | do. | Piece. . . | 25 cts. more per day. | Yes, | Yes. . . . . | Yes, . . . . . | Lowered wages, . . . | 9 | Yes. | No. |
| 18 | do. | do. | . . . . . | . . . . . | do. | . . . . . | . . . . . | . . . . . | 9 | No. | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | do. | Hour, . . | . . . . . | . . . . | . . . . . | No. . . . . | . . . . . | 9 | No. | |
| 20 | do. | do. | Hour, . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 21 | do. | do. | . . . . . | . . . . . | do. . | No. . . . . | No. . . . . | . . . . . | 9 | Yes. | Yes. |
| 22 | do. | do. | Piece, . . | 25 to 50 cents per day more. | do. . | Yes. . . . . | Yes. . . . . | . . . . . | 9 | No. . | No. |

## WORKMEN IN BUILDING TRADES.—BUTLER COUNTY.

| Office number. | Nationality, where born. | Trade or occupation | Did you serve an apprenticeship, if so, for how long. | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment. | During what part of the years. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Carpenter, | 4 years, | 19 cts., | 26 cts., | 26 cts., | 23 cts., | 21 cts., | 5 months, | | | 1½ months | 2 months, |
| 2 | do. | do. | 3 | 20 | 23 | 25 | 25 | 25 | 2 | | | | |
| 3 | do | do. | 3 | 25 | 30 | 30 | 35 | 35 | 3 | 3 months, | | | |
| 4 | do. | do. | 3 | 14 | 14 | 11 | 11 | 14 | | 3 | | | |
| 5 | do. | do. | 3 | 19 | 25 | 22 | 25 | 22 | 3 | 3 | 3 months, | | |
| 6 | do | do. | 1 | 18 | 28 | 20 | 20 | 18 | | 3 | | | |
| 7 | do. | do. | 4 | 18 | 20 | 25 | 25 | 25 | 2 | | | | |
| 8 | do. | do. | 2½ | 20 | 20 | 20 | 25 | 25 | | | | | |
| 9 | do | do. | 3 | 28 | | | | | 1 | | | | |
| 10 | do. | do. | 4 | 28 | 20 | 25 | 25 | 25 | 6 | 5 | 3 | 2 | 1 |
| 11 | do. | do. | 3 | 17 | 18 | 18 | 15 | | | 1 | | | |
| 12 | do. | do | No, | 18 | 20 | 22 | 23 | 22 | | | | | |
| 13 | do. | do. | 3 | 20 | 25 | 50 | 50 | 25 | | | | | |
| 14 | do. | do. | 3 | 28 | 28 | 25 | 25 | 22 | | | | | |
| 15 | do. | do | 3 | 25 | 25 | 25 | 20 | 18 | 2 | | | | |
| 16 | do | do | 3 | 20 | 25 | 25 | | | 3 | 1½ | 1 | | |
| 17 | do. | do. | 3 | 20 | 30 | 25 | 25 | 25 | 6 | 4 | | | |
| 18 | do. | do | No, | 15 | 20 | | | | 2 | 3 | | | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | do. | 3 | 18 | 20 | 25 | 25 | 25 | ..... | ..... | ..... | ..... | ..... | ..... |
| 20 | do. | do. | 2½ | 18 | 25 | 25 | 25 | 30 | 3 | 2 | ½ | ½ | ¾ | |
| 21 | do. | do. | 6 | 18 | 23 | 25 | 25 | 20 | 2 | ..... | ..... | ..... | ..... | ..... |
| 22 | do. | do. | 3 | 18 | 25 | 22 | 22 | 22 | ..... | ..... | ..... | ..... | ..... | ..... |
| 23 | do. | do. | 3 | 32 | 40 | 40 | 40 | 40 | ½ | ..... | ..... | ..... | ..... | ..... |
| 24 | do. | do. | 3 | 18 | 20 | 25 | 25 | ..... | 5 | 4 | 2 | ..... | ..... | ..... |
| 25 | do. | do. | ..... | 20 | 18 | 20 | 22 | 25 | 2 | ..... | ..... | ..... | ..... | ..... |
| 26 | do | do. | 2½ | ..... | 31 | 50 | 22 | 19 | 2 | 4 | 2½ | ½ | ..... | ..... |
| 27 | do. | do. | 4 | 18 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... |

WORKMEN IN BUILDING TRADES.—BUTLER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, | Carpenter, | Weekly, | $181 13 | ..... | ..... | ..... | $142 26 | United States, | No. |
| 2 | do. | do. | do. | 175 00 | $450 00 | $500 00 | $500 00 | 500 00 | do | No. |
| 3 | do. | do. | do. | 180 00 | 645 00 | 864 00 | 907 20 | 907 20 | do. | No. |
| 4 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | |
| 5 | do. | do. | do. | 100 00 | 270 00 | 240 00 | 360 00 | 360 00 | do. | No. |
| 6 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 7 | do. | do. | do. | 100 00 | 300 00 | 400 00 | 400 00 | 400 00 | do. | No. |
| 8 | do. | do. | Semi-monthly, | ..... | ..... | ..... | ..... | ..... | do. | Sometimes. |
| 9 | do | do. | Weekly, | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 10 | do. | do. | do. | ..... | 336 00 | 486 00 | 513 00 | 594 00 | do. | No. |
| 11 | do. | do. | Semi-monthly, | 275 75 | 552 00 | ..... | ..... | ..... | do. | No. |
| 12 | do. | do. | Weekly, | ..... | ..... | ..... | ..... | ..... | ..... | No. |
| 13 | do. | do. | Contract, | ..... | ..... | ..... | ..... | ..... | United States, | Yes. |
| 14 | do. | do. | Semi-monthly, | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 15 | do. | do. | Weekly, | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 16 | do. | do. | do. | 150 00 | 621 00 | 668 00 | ..... | ..... | do. | No. |
| 17 | do. | do. | do. | ..... | 350 00 | 600 00 | 600 00 | 600 00 | do. | No. |
| 18 | do. | do. | | 75 00 | 500 00 | ..... | ..... | ..... | ..... | No. |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | do. | Weekly | 255 00 | 312 00 | 360 00 | 360 00 | 360 00 | United States | | No |
| 20 | do. | do. | do | 140 00 | 400 00 | 600 00 | 600 00 | 650 00 | do. | | |
| 21 | do. | do. | do. | | | | | | do | | No. |
| 22 | do. | do. | do. | | | | | | do. | | No. |
| 23 | do. | do. | do. | 442 00 | 1200 00 | 1200 00 | 1200 00 | 1200 00 | do. | | No. |
| 24 | do. | do. | do. | 65 00 | 336 00 | 480 00 | 540 00 | | do. | | No. |
| 25 | do. | do. | do. | | | | | | | | |
| 26 | do. | do | | | 450 00 | 922 00 | 576 00 | | United States | | No. |
| 27 | do. | do. | Semi-monthly | | | | | | | | No. |

WORKMEN IN BUILDING TRADES.—BUTLER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Carpenter. | | | Yes, | Yes, 50 per cent., | Yes, | Lowered 40 per cent., | 10 | No. | |
| 2 | do. | do. | | | Yes, | | No, | | 10 | Yes, | No. |
| 3 | do. | do. | | | No, | | Yes, | Lowered 25 per cent. | 9 | Yes, | No. |
| 4 | do. | do. | Hour. | | Yes. | | | | 9 | | |
| 5 | do. | do. | Piece. | 25 cts. per day more. | Yes, | No, | No, | | 10 | No. | |
| 6 | do. | do. | Piece. | | Yes | | | | | | |
| 7 | do. | do. | | No difference. | No, | No. | Yes. | Lowered 30 per cent., | 10 | Yes, | No. |
| 8 | do. | do. | Piece, | 33 per cent. more. | Yes, | Yes, 50 per cent. | Yes. | Lowered. | 10 | Yes, | No. |
| 9 | do. | do. | | | No, | | | | 10 | Yes. | No. |
| 10 | do. | do. | | Very little difference | Yes, | No, | Yes, | Lowered 20 per cent., | 10 | Yes. | No. |
| 11 | do. | do. | | | Yes, | | | | 10 | | |
| 12 | do | do. | | | Yes, | | | | 10 | Yes. | No. |
| 13 | do. | do. | | | Yes. | | | | 10 | Yes, | No. |
| 14 | do. | do, | | | Yes. | Yes, 20 per cent., | Yes, | Lowered, | 9 | Yes. | No. |
| 15 | do. | do. | | | Yes, | | | | 10 | Yes. | No. |
| 16 | do. | do. | Hour, | | Yes. | No, | No, | | 10 | No. | |
| 17 | do. | do | | | Yes. | No. | | | 10 | No. | |
| 18 | do. | do. | Piece. | 25 cts. per day more. | Yes, | | | | 10 | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | do. | do. | ..... | ..... | Yes. . | No, ..... | No, ..... | ..... | 10 | No | |
| 20 | do. | do. | ..... | ..... | ... | Yes; 10 per cent.. .... | Yes, ..... | Lowered 20 per cent | 10 | | |
| 21 | do. | do. | ..... | ..... | No, . | Yes. ..... | No, ..... | ..... | 10 | Yes. . | No. |
| 22 | do. | do. | ..... | ..... | Yes. . | ..... | ..... | ..... | 10 | Yes. . | Yes. |
| 23 | do. | do. | ..... | ..... | Yes, . | No, ..... | No, ..... | ..... | 10 | Yes. . | Yes. |
| 24 | do. | do. | ..... | No difference, ... | Yes, . | ..... | ..... | ..... | 10 | Yes. . | Yes. |
| 25 | do. | do. | ..... | ..... | .... | ..... | ..... | ..... | .... | Yes. . | No. |
| 26 | do. | do. | ..... | ..... | Yes, . | ..... | ..... | ..... | 9 | No. | |
| 27 | do. | do. | ..... | ..... | Yes, . | ..... | ..... | ..... | 10 | No. | |

## WORKMEN IN BUILDING TRADES.—BEAVER COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Ireland, | Carpenter, | 2 years, | 25 cts. | 22½ cts | 25 cts. | 27½ cts | 27½ cts. | 3 months, | 6 months. | ..... | ..... | ..... |
| 2 | France, | do. | 3 | 22 | 25 | 25 | 28 | 28 | 6 | 3 | 2 months. | ..... | ..... |
| 3 | United States, | do. | No. | 25 | 28 | 28 | 25 | 20 | 3 | 4 | 4 | 4 months, | 4 months. |
| 4 | do. | do. | 3 | 25 | 28 | 28 | 28 | 28 | ½ | 3 | 1 | 1 | 1 |
| 5 | do. | do. | 3 | 25 | 28 | 28 | 28 | 28 | 3 | ..... | ..... | ..... | ..... |
| 6 | do. | do. | 3 | 22 | 28 | 28 | 25 | 25 | 3 | 4 | 3 | 4 | 5 |
| 7 | do. | do. | 3 | 25 | 27½ | 30 | 30 | ..... | 3 | 3 | 3 | ..... | ..... |
| 8 | do. | do. | No, | 25 | 28 | 28 | 25 | 25 | 4 | 6 | 4 | ..... | ..... |
| 9 | do. | do. | No, | 25 | 28 | 28 | 31 | ..... | 2 | ..... | ..... | ..... | ..... |
| 10 | do. | do. | 3 | 31 | 31 | 31 | 31 | 28 | ..... | ..... | ..... | ..... | ..... |
| 11 | do. | do. | 3 | 22 | 28 | 28 | ..... | ..... | 1½ | 2½ | 5 | ..... | ..... |
| *12 | do. | do. | No, | 43 | 43 | 39 | 39 | 39 | ..... | ..... | ..... | ..... | ..... |
| 13 | do. | do. | 2 | † | ‡ | 31 | 31 | 31 | ..... | 1 | 2 | 2 | 3 |
| 14 | do. | do. | 3 | 28 | 28 | 28 | 25 | ..... | ..... | ..... | ..... | ..... | ..... |
| 15 | do. | do. | 3 | 28 | 30 | 30 | 30 | 30 | ..... | ..... | ..... | ..... | ..... |
| 16 | do. | do. | 5 | 25 | 25 | 25 | 25 | 25 | ..... | ..... | ..... | ..... | ..... |
| 17 | do. | do. | 2½ | ..... | 28 | 28 | 25 | 25 | ..... | 1 | ..... | ..... | 2 |

| | | |

## WORKMEN IN BUILDING TRADES.—BEAVER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years. | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Ireland, | Carpenter, | Semi-monthly, | $260 00 | $351 00 | $780 00 | $850 00 | $858 00 | United States, | No. |
| 2 | France, | do. | Weekly, | ..... | 558 00 | 495 00 | 910 00 | 840 00 | do. | No. |
| 3 | United States, | do. | Semi-monthly, | ..... | ..... | ..... | ..... | ..... | ..... | No. |
| 4 | do. | do. | do. | 263 25 | 361 90 | 685 20 | ..... | ..... | United States, | No. |
| 5 | do. | do. | do. | 150 00 | ..... | ..... | ..... | ..... | do. | No. |
| 6 | do. | do, | Weekly. | 70 00 | 475 00 | 500 00 | 450 00 | 400 00 | do. | No. |
| 7 | do. | do. | Semi-monthly, | 122 50 | 358 93 | 481 80 | 321 15 | ..... | do. | No. |
| 8 | do. | do, | do. | 100 00 | ..... | ..... | ..... | ..... | ..... | |
| 9 | do. | do. | do. | 350 00 | 300 00 | 400 00 | 190 00 | ..... | ..... | No. |
| 10 | do. | do. | do. | 390 00 | 780 00 | 780 00 | 780 00 | 780 00 | United States, | No. |
| 11 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| *12 | do. | do. | do. | 600 00 | 1084 00 | 1084 00 | 1084 00 | 1084 00 | ..... | No. |
| 13 | do. | do. | Weekly, | ..... | ..... | 275 00 | 275 00 | 275 00 | United States, | No. |
| 14 | do. | do. | Semi-weekly, | 350 00 | 700 00 | 700 00 | 600 00 | ..... | do. | No. |
| 15 | do. | do. | do. | 330 00 | 750 00 | 750 00 | 750 00 | 750 00 | do. | No. |
| 16 | do. | do. | do. | 286 12 | 667 10 | 602 43 | 658 80 | 591 51 | do. | No. |
| 17 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |

*Foreman

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | do. | .... | do. | .... | Weekly, | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 19 | do. | .... | do. | .... | do | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 20 | do. | .... | do. | .... | do. | 320 00 | 675 00 | 750 00 | 650 00 | 650 00 | do | ..... | No. |
| 21 | do. | .... | do. | .... | ..... | ..... | ..... | ..... | ..... | ..... | do | ..... | |
| 22 | do. | .... | do. | .... | ..... | ..... | ..... | ..... | ..... | ..... | do. | ..... | |
| 23 | do. | .... | do. | .... | Semi-monthly | ..... | ..... | ..... | ..... | ..... | do. | ..... | |
| 24 | do | .... | do. | .... | Weekly, | ..... | ..... | ..... | ..... | ..... | do. | ..... | No |
| 25 | do. | .... | do. | .... | Monthly. | ..... | ..... | ..... | ..... | ..... | do. | ..... | |
| 26 | do. | .... | do. | .... | Semi-monthly. | ..... | ..... | ..... | ..... | ..... | do. | ..... | No |
| 27 | do. | .... | do. | .... | do. | ..... | ..... | ..... | ..... | ..... | do. | ..... | No. |
| 28 | do. | .... | do. | .... | ..... | 250 00 | 400 00 | 400 00 | 400 00 | 400 00 | do. | ..... | No. |

WORKMEN IN BUILDING TRADES.—BEAVER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day. | If there is a difference, state how much. | Are apprentices employed in your trade. | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent. | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Ireland, | Carpenter, | | No difference, | Yes, | No, | | | 10 | No | |
| 2 | France, | do. | Hour, | | No, | No, | No, | | 9 | Yes, | Yes. |
| 3 | United States, | do. | | | No, | | | | 9 | Yes, | No. |
| 4 | do. | do. | | | Yes, | | | | 9 | No. | |
| 5 | do. | do. | | | | | | | 9 | Yes, | No |
| 6 | do. | do. | | | Yes, | | | | 9 | Yes, | No. |
| 7 | do. | do. | | | Yes. | | | | 9 | No. | |
| 8 | do. | do. | | | Yes | | | | | | |
| 9 | do. | do. | | | | | | | 9 | Yes, | No. |
| 10 | do. | do. | | No difference, | Yes, | No, | No, | | 9 | Yes, | No. |
| 11 | do. | do. | Hour, | | Yes. | | | | 8 | No. | |
| *12 | do. | do. | | | Yes. | No, | No, | | 9 | Yes, | No |
| 13 | do. | do. | | | Yes, | No, | No, | | 9 | Yes, | No |
| 14 | do. | do. | | | Yes. | | | | 9 | Yes, | Yes |
| 15 | do. | do. | Hour, | | Yes. | No, | Yes, | Lowered 33 per cent., | 9 | Yes, | No |
| 16 | do. | do. | | | No, | | No, | | 9 | Yes, | No. |
| 17 | do. | do. | | | Yes, | | No | | 9 | Yes, | Yes. |

* Foreman.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | do. | do. | ..... | ..... | Yes. . | Yes; 33 per cent.. .... | Yes, ..... | Lowered 33 per cent . | 9 | Yes. . | No. |
| 19 | do. | do. | Piece. . . | 33 per cent. more, . | No. . | Yes; 50 per cent.. .... | Yes. ..... | Lowered 33 per cent.. | 9 | No. | |
| 20 | do. | do. | ..... | ..... | Yes. . | Yes; 20 per cent , .... | No. ..... | ..... | 9 | Yes, . | No. |
| 21 | do. | do. | ..... | ..... | .... | ..... | ..... | ..... | .... | .... | |
| 22 | do. | do. | ..... | ..... | .... | ..... | ..... | ..... | .... | .... | |
| 23 | do.* | do. | ..... | ..... | Yes, . | Yes; 30 per cent., .... | Yes. ..... | Lowered 20 per cent., | 9 | Yes, . | Yes. |
| 24 | do. | do. | ..... | ..... | Yes. . | Yes; 50 per cent., .... | Yes, ..... | Lowered 25 per cent., | 9 | Yes. . | Yes. |
| 25 | do. | do. | ..... | ..... | Yes, . | Yes; 25 per cent., .... | Yes, ..... | Lowered. ..... | 9 | Yes. . | Yes. |
| 26 | do. | do. | ..... | ..... | Yes, . | Yes; 50 per cent., .... | Yes, ..... | Lowered 20 per cent., | 9 | Yes, . | Yes. |
| 27 | do. | do. | ..... | ..... | Yes, . | ..... | ..... | ..... | 9 | | |
| 28 | do. | do. | ..... | ..... | .... | ..... | ..... | ..... | 9 | Yes, . | Yes. |

## WORKMEN IN BUILDING TRADES.—VENANGO COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment. | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Germany, | Carpenter. | 3 years, | 19 cts. | 22 cts. | 28 cts. | 31 cts. | cts. | 1 months, | months, | months, | months, | months, |
| 2 | do. | do. | 3 | 28 | 28 | 28 | 25 | 25 | 4 | 4 | 4 | 4 | 4 |
| 3 | United States, | do. | Yes, | 25 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 4 | do. | do. | 3 | 21 | 21 | 21 | 21 | 21 | 3 | 3 | 3 | 3 | 3 |
| 5 | do. | do. | No, | 23 | 25 | 25 | 25 | 22 | 3 | 3 | 3 | 3 | 3 |
| 6 | do. | do. | No, | 23 | 22 | 20 | 20 | 20 | ..... | 0 | 4 | 0 | 0 |
| 7 | do. | do. | 3 | 25 | 25 | 22 | 23 | 22 | 4 | 3 | 0 | 0 | 0 |
| 8 | do. | do. | 3 | 23 | 25 | 25 | * | * | ..... | 2 | 2 | ..... | ..... |
| 9 | do. | do. | 4 | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 0 | 0 | 0 |
| 10 | do. | do. | 2 | 22 | 24 | 24 | 24 | 25 | 1 | 0 | 0 | 0 | 8 |
| 11 | do. | do. | ..... | 28 | 28 | 28 | ..... | ..... | 3 | 3 | 3 | 3 | 3 |
| 12 | do. | do. | 3 | 18 | 20 | 25 | 25 | 25 | 5 | 3 | 8 | ..... | 2 |
| 13 | do. | do. | 3 | 27 | 28 | 28 | 25 | 25 | 2 | 4½ | 3½ | ..... | ..... |
| 14 | do. | do. | 3 | 25 | 28 | 28 | 25 | 25 | ..... | 3 | 0 | 0 | 0 |
| 15 | do. | do. | 2 | 28 | 28 | 28 | 28 | 25 | 1 | 2 | 2 | 3 | 3 |
| 16 | do. | do. | 1 | 25 | 28 | 28 | 28 | 28 | 0 | 0 | 0 | 0 | 0 |

* Contractor.

| | | |

WORKMEN IN BUILDING TRADES.—VENANGO COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly. | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Germany, | Carpenter, | Weekly, | $65 00 | $275 00 | $320 00 | $350 00 | $350 00 | United States, | Yes. |
| 2 | do. | do. | do. | | | | | | do. | No. |
| 3 | United States, | do. | do. | | | | | | do. | No. |
| 4 | do. | do. | Semi-monthly, | 250 00 | 500 00 | 500 00 | 500 00 | 500 00 | do. | No. |
| 5 | do | do. | Weekly, | 400 00 | | | | | | No. |
| 6 | do. | do. | do. | | | | | 624 00 | | No. |
| 7 | do. | do. | Semi-monthly, | 75 00 | 450 00 | 600 00 | 625 00 | 600 00 | United States, | Sometimes. |
| 8 | do. | do, | Weekly, | | | | | | do. | |
| 9 | do. | do. | | 300 00 | 425 00 | 530 00 | 550 00 | 540 00 | do. | Sometimes. |
| 10 | do. | do. | Semi-monthly, | 240 00 | 720 00 | 720 00 | 720 00 | 512 00 | do. | No. |
| 11 | do. | do. | Weekly, | 165 00 | | | | | | No. |
| 12 | do. | do. | do. | 32 00 | 494 00 | 280 00 | | | United States, | No. |
| 13 | do. | do. | do. | | | | | | do. | Sometimes. |
| 14 | do. | do. | do. | 100 00 | 150 00 | 400 00 | 450 00 | 500 00 | do. | No. |
| 15 | do. | do. | do. | 315 00 | 720 00 | 640 00 | 580 00 | 515 00 | do. | No. |
| 16 | do. | do. | do | 350 00 | 750 00 | 750 00 | 750 00 | 750 00 | do. | No. |
| 17 | do. | do. | Monthly. | | | | | | do. | Sometimes, |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | do. | do. | | | | | | | | | Sometimes, |
| 19 | do. | do. | Weekly, | 150 00 | 400 00 | 300 00 | | | | United States, | No. |
| 20 | do. | do. | do. | | | | | | | do. | No. |

WORKMEN IN BUILDING TRADES.—VENANGO COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much, | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Germany, | Carpenter, | Hour, | 25 per cent. more | Yes, | Yes. ten per cent. | Yes, | Lowered 20 per cent., | 9 | No, | |
| 2 | do. | do. | | | Yes, | Yes, 33 per cent., | No, | | 9 | No, | |
| 3 | United States, | do. | | | Yes, | No, | Yes, | Lowered, | 10 | Yes, | No. |
| 4 | do. | do. | | | Yes, | | Yes, | | 10 | No, | |
| 5 | do. | do. | | | Yes, | No, | Yes, | Lowered 25 per cent., | 10 | Yes, | No. |
| 6 | do. | do. | | | No, | | Yes, | Lowered 10 per cent., | 10 | Yes, | No. |
| 7 | do. | do. | Piece, | | Yes, | | Yes, | Lowered 5 per cent., | 10 | Yes, | Yes. |
| 8 | do. | do. | | | Yes. | | | | 10 | Yes, | |
| 9 | do. | do. | Piece, | | Yes, | | Yes, | Lowered 33 per cent., | 10 | No, | |
| 10 | do. | do. | | | Yes, | No, | Yes, | | 10 | Yes, | No. |
| 11 | do. | do. | | No difference, | | | | | | | |
| 12 | do. | do. | | | No. | | Yes, | Lowered 10 per cent., | 10 | Yes, | No. |
| 13 | do. | do. | Piece, | $1.50 to $2.00 per day more. | Yes, | Yes, | Yes, | Lowered 10 per cent., | 9 | No, | |
| 14 | do. | do. | Hour, | | No, | Yes, 33 per cent., | Yes, | Lowered, | 9 | No, | |
| 15 | do. | do. | | | Yes, | | Yes, | Raised wages, | 9 | No, | |
| 16 | do. | do. | | | Yes, | No, | No. | | 9 | Yes, | No. |
| 17 | do. | do. | | | No, | | | | 10 | Yes, | No. |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 18 | do. | do. | ..... | ..... | Yes. | ..... | ..... | ..... | 9 | Yes. | Yes. |
| 19 | do. | do. | ..... | ..... | Yes. | ..... | ..... | ..... | 9 | No. | |
| 20 | do. | do. | ..... | ..... | Yes, | ..... | Yes, ..... | Raised 25c. per day, . | 9 | No. | |

## WORKMEN IN BUILDING TRADES.—WESTMORELAND COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Scotland, | Painters, | 5 years, | 28 cts., | 28 cts., | 28 cts., | 28 cts., | ..... | ½ months, | 1½ months | months, | months, | months. |
| 2 | United States, | do. | 4 | 33⅓ | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 3 | do. | do. | 3½ | 33⅓ | 33⅓ | 33⅓ | 33⅓ | 33⅓ | 1 | ..... | 2 | 2 | 2½ |
| 4 | do. | do. | 3 | 19½ | 25 | 25 | 25 | 16⅔ | 6 | 3 | 1 | 5 | ..... |
| 5 | do. | do. | Yes, | ..... | ..... | ..... | ..... | ..... | 2 | 2 | 2 | 2 | ..... |
| 6 | do. | do. | 4 | * | * | 28 | 25 | 22 | 3 | 4 | 2 | ..... | ..... |
| 7 | do. | do. | 3 | 25 | 25 | 25 | 25 | 25 | 2 | 7 | 3 | 2½ | 2 |
| 8 | do. | do. | No, | 25 & 28 | 22½ | 20 | 17½ | 28 | 2 | 3 | ..... | ..... | ..... |
| 9 | do. | do. | 3 | 25 | 25 | 25 | ..... | ..... | 3 | 2 | 2 | ..... | ..... |
| 10 | do. | do. | 3 | 22 | 25 | 25 | 33 | 17½ | 1 | 2 | 2 | 1 | 2 |
| 11 | do. | do. | 3 | 22 | 22 | 16 | 11 | ..... | 4½ | 3½ | 7½ | 4 | ..... |
| 12 | do. | do. | 2 | ..... | ..... | ..... | ..... | ..... | 5½ | 5½ | 2 | 3 | ..... |
| 13 | do. | do. | 3 | 25 | 25 | 25 | 25 | * | 3 | 4 | 2 | 2 | 1 |
| 14 | do. | do. | 3 | 20 | 25 | 30 | 33 | 33 | 5 | 7 | 5 | 2 | 3 |
| 15 | do. | do. | 3 | 25 | 25 | 25 | 25 | 20 | 2½ | 3 | 4 | 1 | 5 |
| 16 | do. | do. | 4 | 16 | 14 | 14 | 11 | 11 | ..... | ..... | ..... | ..... | ..... |

* Contractor.

WORKMEN IN BUILDING TRADES.—WESTMORELAND COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly. | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Scotland | Painters | Semi-monthly | $299 02 | $283 13 | ..... | ..... | ..... | Scotland | No. |
| 2 | United States | do. | Weekly | ..... | ..... | ..... | ..... | ..... | United States. | |
| 3 | do. | do. | do. | 358 00 | 787 00 | $751 00 | $751 00 | $715 00 | do. | No. |
| 4 | do. | do. | Semi-monthly | ..... | 468 00 | 416 00 | 364 00 | ..... | do. | No. |
| 5 | do. | do. | ..... | 400 00 | 600 00 | 600 00 | 700 00 | 1,000 00 | do. | Job. |
| 6 | do. | do. | ..... | 70 00 | 500 00 | 600 00 | 400 00 | ..... | do. | Yes. |
| 7 | do. | do. | Semi-monthly | 309 00 | 417 00 | 364 00 | 476 00 | 656 00 | do. | No. |
| 8 | do. | do. | Weekly | 184 75 | 475 00 | ..... | ..... | ..... | ..... | |
| 9 | do. | do. | Semi-monthly | 161 00 | 501 00 | 594 00 | ..... | ..... | United States. | No. |
| 10 | do. | do. | ..... | 220 95 | 260 00 | 80 00 | 186 50 | 117 50 | do. | No. |
| 11 | do. | do. | Semi-monthly | 182 00 | 450 00 | 162 00 | 240 00 | ..... | do. | No. |
| 12 | do. | do. | ..... | 44 00 | 400 00 | 600 00 | 650 00 | 958 00 | do. | Yes. |
| 13 | do. | do. | Semi-monthly | 150 00 | 450 00 | 500 00 | 500 00 | 550 00 | do. | No. |
| 14 | do. | do. | Weekly | 30 00 | 300 00 | 500 00 | 750 00 | 650 00 | do. | Yes. |
| 15 | do. | do. | Semi-monthly | 185 00 | 152 00 | 212 00 | 195 00 | 65 00 | do. | No. |
| 16 | do. | do. | Weekly | 225 00 | 480 00 | 380 00 | 300 00 | 300 00 | do. | No. |

WORKMEN IN BUILDING TRADES.—WESTMORELAND COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Scotland, | Painters, | | | Yes, | No, | No, | | 9 | No, | |
| 2 | United States, | do. | | | Yes, | No, | No, | | 9 | No, | |
| 3 | do. | do. | | | No, | | | | 9 | No, | |
| 4 | do. | do. | | | Yes, | No, | No, | | 9 | No, | |
| 5 | do. | do. | | | No, | | Yes, | | 9 | Yes, | No. |
| 6 | do. | do. | Piece, | 33⅓ per cent. more, | Yes, | No, | | | 9 | No, | |
| 7 | do. | do. | Hour, | | Yes, | | | | 9 | No, | |
| 8 | do. | do. | | | Yes, | | | | 9 & 10 | No. | |
| 9 | do. | do. | Hour, | | Yes, | | | | 9 | No, | |
| 10 | do. | do. | | | Yes, | No, | No, | | 9 | No, | |
| 11 | do. | do. | | | Yes, | | | | 9 | No, | |
| 12 | do. | do. | Piece, | 33 per cent. more, | Yes, | | | | 8 & 10 | Yes, | Yes. |
| 13 | do. | do. | | No difference, | Yes, | No, | No, | | 9 | No, | |
| 14 | do. | do. | Piece, | 30 per cent. more, | Yes, | No, | | | 9 | No, | |
| 15 | do. | do. | Piece, | $1.00 per day more, | Yes, | No, | No, | | 9 | No, | |
| 16 | do. | do. | | | Yes, | No, | | | 9 | No, | |

## WORKMEN IN BUILDING TRADES.—BEAVER COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Italy | Stonemason | 3 years | 33 cts. | 40 cts. | 40 cts. | 40 cts. | 40 cts. | 4½ months | 7 months. | 6 months. | 6 months. | 5 months. |
| 2 | do. | do. | 3 | 33 | 40 | 40 | 40 | 40 | 4 | 7 | 6 | 6½ | 5 |
| 3 | do. | do. | 3 | 33 | 40 | 40 | 40 | 40 | 4 | 7 | 6 | 6 | 6 |
| 4 | Hungary | do. | 3 | 33 | 40 | 40 | 40 | 40 | 4 | 10½ | 6 | 5 | 4 |
| 5 | England | do. | 3 | 33 | 40 | 40 | 39 | 33 | 3 | ..... | ..... | ..... | 3 |
| 6 | United States | do. | 3 | 33 | 40 | 40 | 40 | 39 | ..... | ..... | ..... | ..... | ..... |
| 7 | do. | do. | 5 | 33 | 40 | 39 | 36 | 36 | ..... | ..... | ..... | ..... | ..... |
| 8 | do. | do. | 3 | 22 | 28 | 33 | 36 | 39 | ..... | 6 | 5 | 6 | 6 |
| 9 | do. | do. | 4 | 33 | 40 | 40 | 40 | 39 | ..... | ..... | ..... | ..... | ..... |
| 10 | do. | do. | 3 | 30 | 39 | 39 | 40 | 40 | ..... | ..... | ..... | ..... | ..... |
| 11 | do. | do. | 3 | 30 | 30 | 30 | 30 | 30 | 2½ | 3 | 3 | 3 | 3 |
| 12 | do. | do. | 2½ | 33 | 33 | 33 | ..... | ..... | 3 | 5 | 3 | 5 | 5 |
| 13 | do. | do. | 4 | 33 | 40 | 40 | 39 | 36 | 3 | 3 | 3 | 3 | 3 |
| 14 | do. | Bricklayer | 3 | 39 | 44 | 50 | 44 | 44 | ..... | ..... | ..... | ..... | ..... |
| 15 | do. | do. | 3 | 33 | 44 | 44 | ..... | ..... | 3 | 4 | 4 | ..... | ..... |
| 16 | England | do. | 5 | 39 | 39 | 44 | ..... | ..... | 3 | 3 | 3 | ..... | ..... |
| 17 | United States | do. | 3 | 39 | 44 | 44 | 44 | ..... | 3 | ..... | ..... | ..... | ..... |

WORKMEN IN BUILDING TRADES.—BEAVER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 18 | United States. | Bricklayer, | 3 | 39 | 44 | 44 | 44 | 44 | 3 | 1 | ..... | ..... | ..... |
| 19 | do. | do. | 3 | 44 | * | * | * | * | 4 | ..... | ..... | ..... | ..... |
| 20 | do. | do | 3 | 39 | 44 | 45 | 45 | 45 | 4 | 4 | 3 | 3 | 3 |

* Contractor.

WORKMEN IN BUILDING TRADES.—BEAVER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Italy. | Stonemason. | Semi-monthly. | $108 00 | $400 00 | $480 00 | $480 00 | $560 00 | Italy. | No. |
| 2 | do. | do. | do. | 144 00 | 400 00 | 480 00 | 540 00 | 560 00 | do. | No. |
| 3 | do. | do. | do. | 118 80 | 396 00 | 475 20 | 475 20 | 496 80 | do. | No. |
| 4 | Hungary. | do. | do. | 144 00 | 120 00 | 480 00 | 560 00 | 640 00 | Hungary. | No. |
| 5 | England. | do. | do. | 198 00 | 600 00 | 600 00 | 600 00 | 600 00 | United States. | Sometimes. |
| 6 | United States. | do. | do. | 150 00 | 450 00 | 750 00 | 600 00 | 550 00 | do. | Sometimes. |
| 7 | do. | do. | do. | ..... | 481 00 | 543 00 | ..... | ..... | do. | No. |
| 8 | do. | do. | Monthly. | 150 00 | 175 00 | 200 00 | 300 00 | 325 00 | do. | No. |
| 9 | do. | do. | Semi-monthly. | ..... | ..... | ..... | ..... | ..... | do. | Sometimes. |
| 10 | do. | do. | Weekly. | ..... | ..... | ..... | ..... | ..... | do. | Sometimes. |
| 11 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do. | Sometimes. |
| 12 | do. | do. | ..... | 45 00 | 95 00 | 135 00 | 60 00 | 50 00 | do. | Sometimes. |
| 13 | do. | do. | Monthly and semi-monthly. | 210 00 | 608 00 | 690 00 | 670 00 | 700 00 | do. | Sometimes |
| 14 | do. | do. | Weekly. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 15 | do. | Bricklayer. | Semi-monthly. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 16 | England. | do. | do. | 125 00 | ..... | ..... | ..... | ..... | England. | No. |
| 17 | United States. | do. | do. | 110 00 | ..... | ..... | ..... | ..... | United States. | ..... |

WORKMEN IN BUILDING TRADES.—BEAVER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 18 | United States, . . . . | Bricklayer, . . . . | Semi-monthly, . . | $121 72 | $637 30 | $510 30 | $510 45 | $475 90 | United States, . . . . . | No. |
| 19 | do. . . . . | do. . . . . | Weekly, . . . . . | 160 00 | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | Sometimes. |
| 20 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |

WORKMEN IN BUILDING TRADES.—BEAVER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen. If so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Italy. | Stonemason, | | No difference. | Yes, | | | | 9 | No, | |
| 2 | do. | do | | No difference, | Yes. | | | | 9 | No, | |
| 3 | do. | do. | | No difference, | Yes. | | | | 9 | Yes, | |
| 4 | Hungary, | do | | No difference. | Yes. | | | | 9 | Yes, | Yes. |
| 5 | England. | do. | | No difference, | Yes, | | | | 9 | Yes, | No. |
| 6 | United States. | do. | | No difference, | Yes. | Yes, | No, | | 9 | Yes. | Yes. |
| 7 | do. | do. | Hour, | | Yes. | | | | 9 | No. | |
| 8 | do. | do. | Hour, | | No, | | | | 9 | No, | |
| 9 | do | do. | | No difference, | Yes, | | | | 9 | Yes, | Yes. |
| 10 | do. | do. | | No difference, | Yes, | | | | 9 | Yes, | No. |
| 11 | do. | do. | Hour, | 50 per cent. more, | Yes, | Yes: 25 per cent. | No, | | 9 | Yes, | Yes. |
| 12 | do | do. | | | Yes, | | | | 10 | No. | |
| 13 | do. | do. | | No difference, | Yes, | | | | 9 | No, | |
| 14 | do. | Bricklayer, | | | Yes. | No, | No. | | 9 | No, | |
| 15 | do. | do. | | | Yes, | | | | 9 | No, | |
| 16 | England, | do. | Hour, | | Yes, | | | | 9 | | |
| 17 | United States, | do. | | | Yes, | | | | 8 & 9 | | |

WORKMEN IN BUILDING TRADES.—BEAVER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages. | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | United States, | Bricklayer, | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 8 & 9 | Yes, | No, |
| 19 | do. | do. | . . . . . | . . . . . | Yes, | No, . . . . . | No, . . . . . | . . . . . | 9 | Yes, | No, |
| 20 | do. | do. | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 9 | Yes, | No, |

## WORKMEN IN BUILDING TRADES.—MERCER COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, If so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Scotland. | Bricklayer, | 5 years, | 40 cts. | 45 cts | 45 cts. | 45 cts. | 45 cts. | 6 months, | 4 months, | 4 months, | 4 months, | 4 months, |
| 2 | do. | do. | 4 | 39 | 44 | 44 | 44 | 40 | 3 | 3 | 3 | 3 | 3 |
| 3 | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | |
| 6 | United States, | Plasterer, | 2½ | 20 | 28 | 30 | 33 | 33 | 4 | 4 | 4 | 2 | |
| 7 | do. | do. | 3 | | | | | | 3 | 1 | 2 | 1 | 4 |
| 8 | Ireland. | do. | 3 | 35 | 33 | 33 | 33 | 33 | 3 | 3 | 3 | 3 | 3 |
| 9 | United States, | do. | Yes, | 31 | 33 | * | * | * | 3 | 3 | | | |
| 10 | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | |
| 13 | United States. | Stonemason, | 3 | 33 | 36 | 36 | 36 | 36 | 6 | 4 | 4 | 5 | 4 |
| 14 | England, | do. | 4 | 35 | 35 | 40 | 40 | 40 | 3 | 3 | 3 | 3 | 3 |
| 15 | United States. | do. | 3 | 36 | 40 | 40 | 40 | 40 | 5 | 6 | 6 | 6 | 6 |
| 16 | do. | do. | 5 | 40 | 45 | 45 | 40 | 40 | 4½ | 4 | | 5 | 5 |
| 17 | do. | do. | 3 | 35 | 40 | 40 | 39 | 39 | 3 | 3 | 3 | 3 | 3 |

* Contractor.

WORKMEN IN BUILDING TRADES.—MERCER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship. If so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 18 | United States, | Stonemason, | 2 years, . . . | 30 cts., . . | 33 cts., . . | 33 cts., . . | 28 cts., . . | 28 cts. . . . | 3 months, . . | 3 months, | months, | 3 months, | 4 mon hs, |
| 19 | do. | do. | 3 . . . | 28 . . | 33 . . | 33 . . | 33 . . | 33 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 20 | do. | do. | No, . . . | 29 . . | 33 . . | 33 . . | 33 . . | 29 . . | 3½ . . | 3 | 3 | 3 | 3½ |
| 21 | do. | do. | 3 . . . | 30 . . | 33 . . | 33 . . | 25 . . | 25 . . | 2 . . | 2 | 5 | . . . . . | . . . . . |
| 22 | Germany, . . . | do. | 3 . . . | 25 . . | 35 . . | 40 . . | 40 . . | 40 . . | 5 . . | 4 | 4 | 4 | 4 |
| 23 | do. . . . | do. | 3 . . . | 25 . . | 33 . . | 33 . . | 33 . . | 33 . . | 3½ . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 24 | do. . . . | do. | 3 . . . | 33 . . | 33 . . | 33 . . | 33 . . | 33 . . | 3½ . . | 3½ | 3½ | 3 | 3 |
| 25 | Wales, . . . . | do. | 3 . . . | 25 . . | 30 . . | 33 . . | 38 . . | 40 . . | 4 . . | 4 | 4 | 4 | 4 |
| 26 | do. . . . . | do. | 4 . . . | 36 . . | 40 . . | 40 . . | 36 . . | 36 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |

WORKMEN IN BUILDING TRADES.—MERCER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Scotland, | Bricklayer, | Semi-monthly. | | $500 00 | $500 00 | $500 00 | $500 00 | Scotland, | No. |
| 2 | do. | do. | do. | $275 00 | 750 00 | 900 00 | 750 00 | 600 00 | do. | No. |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | United States, | Plasterer. | | 50 00 | 400 00 | 350 00 | 450 00 | | United States. | |
| 7 | do. | do. | | 157 50 | | | | | do. | Yes. |
| 8 | Ireland, | do. | | 216 00 | 648 00 | 648 00 | 648 00 | 648 00 | do. | Yes. |
| 9 | United States, | do. | Semi-monthly. | 100 00 | | | | | do. | No. |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | United States, | Stonemason, | Semi-monthly. | | 400 00 | 450 00 | 400 00 | 500 00 | United States. | Sometimes. |
| 14 | England, | do. | do. | 50 00 | 240 00 | 375 00 | 450 00 | 450 00 | England, | |
| 15 | United States, | do. | do. | | | | | | United States, | Sometimes |
| 16 | do. | do. | do. | 133 76 | 700 00 | 1000 00 | 650 00 | 600 00 | do. | No. |
| 17 | do. | do. | | 75 00 | 200 00 | 300 00 | 200 00 | 250 00 | do. | Sometimes. |
| 18 | do. | do. | Weekly, | 137 00 | | | | | do. | |

WORKMEN IN BUILDING TRADES.—MERCER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 19 | United States, | Stonemason, | Semi-monthly, | ..... | ..... | ..... | ..... | ..... | United States, | Sometimes. |
| 20 | do. | do. | ..... | $80 00 | $288 00 | $300 00 | $300 00 | $275 00 | do. | Yes. |
| 21 | do. | do. | Weekly, | 183 35 | 216 55 | ..... | ..... | ..... | do. | |
| 22 | Germany, | do. | Semi-monthly, | 50 00 | 200 00 | 300 00 | 450 00 | 650 50 | Germany, | No. |
| 23 | do. | do. | ..... | 130 00 | 260 00 | 340 00 | 350 00 | ..... | United States. | No. |
| 24 | do. | do. | Semi-monthly, | 180 00 | 528 00 | 516 00 | 636 00 | 585 00 | do. | |
| 25 | Wales. | do. | do. | 50 00 | 300 00 | 375 00 | 400 00 | 390 00 | do. | Sometimes. |
| 26 | do. | do. | do. | 90 00 | 560 00 | 425 00 | 425 00 | 430 00 | Wales. | No. |

WORKMEN IN BUILDING TRADES.—MERCER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much? | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Scotland. . . . | Bricklayer, | Hour. . . | . . . . . | Yes, . . | No, . . . . . | No, . . . . . | . . . . . | 9 | Yes, | No. |
| 2 | do. . . . | do. | . . . . . | . . . . . | Yes, . . | . . . . . | . . . . . | . . . . . | 9 | Yes. | No. |
| 3 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | | | |
| 4 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | | | |
| 5 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | | | |
| 6 | United States, | Plasterer, | . . . . . | . . . . . | Yes. . | . . . . . | . . . . . | . . . . . | 9 | Yes, | No. |
| 7 | do. | do. | Piece, . . | $1.00 per day more, | Yes, . . | . . . . . | . . . . . | . . . . . | 9 | No, | |
| 8 | Ireland, . . . | do. | Piece, . . | . . . . . | No, | . . . . . | . . . . . | . . . . . | 9 | Yes, | No. |
| 9 | United States, | do. | . . . . . | No difference, . . . | Yes, . . | . . . . . | . . . . . | . . . . . | 9 | No, | |
| 10 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | | | |
| 11 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | | | |
| 12 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | | | |
| 13 | United States, | Stonemason, | Piece, . . | 25 cts. per day more. | Yes, . . | No, . . . . . | No, . . . . . | . . . . . | 9 | No | |
| 14 | England, . . . | do. | . . . . . | . . . . . | Yes, . . | . . . . . | . . . . . | . . . . . | 9 | Yes. | No. |
| 15 | United States, | do. | . . . . . | No difference, . . . | Yes, . . | . . . . . | . . . . . | . . . . . | 9 | Yes, | No. |
| 16 | do. | do. | . . . . . | . . . . . | Yes. . | No, . . . . . | No, . . . . . | . . . . . | 9 | No, | |
| 17 | do. | do. | Piece. . | 10 per cent. more, . . | Yes, . . | . . . . . | . . . . . | . . . . . | 9 | Yes, | No. |
| 18 | do. | do. | . . . . . | . . . . . | Yes. . | . . . . . | . . . . . | . . . . . | 9 | No, | |

WORKMEN IN BUILDING TRADES.—MERCER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | United States, | Stonemason, | Piece, . . | 50 cts. per day more, | Yes, . | . . . . . | Yes, . . . . . | Raised wages, . . . . | 9 | Yes, | No. |
| 20 | do. | do. | . . . . . | . . . . . | Yes. . | . . . . . | . . . . . | . . . . . | 9 | No, | |
| 21 | do. | do. | . . . . . | . . . . . | Yes. . | . . . . . | . . . . . | . . . . . | 9 | Yes, | No. |
| 22 | Germany, . . | do. | . . . . . | No difference, . . . | Yes, . | No. . . . . | No. . . . . | . . . . . | 9 | Yes, | No. |
| 23 | do. . . | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | No, | |
| 24 | do. . . | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | Yes. | |
| 25 | Wales, . . . . | do. | Hour, . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | No, | |
| 26 | do. . . . . | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | Yes, | No. |

## WORKMEN IN BUILDING TRADES.—BLAIR COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Ireland. . . . . | Bricklayer, . . | No, . . . . . | 40 cents, | 40 cents, | 40 cents, | 40 cents, | 40 cents, | 3 months, . . | 4 months, | 5 months, | 5 months, | 5 months. |
| 2 | do. . . . . | do. . . | 3 years, . . | 35 | 40 | 40 | 40 | 40 | 5 . . | 8 | 10 | 9 | 7 |
| 3 | United States, . | do. . . | 3½ . . | 30 | 40 | 40 | 40 | 38 | 4 . . | 6 | 6 | 6 | 6 |
| 4 | do. . | do. . . | 4 . . | 30 | 40 | 40 | 35 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 5 | do. . | do. . . | 7 . . | 40 | 40 | 40 | 40 | 40 | 4 . . | 6½ | 6½ | 6½ | 6½ |
| 6 | do. . | do. . . | 4 . . | 30 | 40 | 50 | 40 | 40 | 5½ . . | 4 | 2 | 3 | 3 |
| 7 | Ireland, . . . . | Stonemason, . | 3 . . | 35 | 35 | 35 | 30 | 30 | 4 . . | 3 | 4 | 8 | 6 |
| 8 | Scotland, . . . | do. . | 4 . . | 22 | 30 | 30 | 30 | 30 | 3½ . . | 3 | 2½ | . . . . . | . . . . . |
| 9 | United States, . | do. . | Yes, . . . . . | 25 | 25 | 30 | 25 | 25 | 1 . . | 3 | 3 | 3 | 3 |
| 10 | do . | do. . | 3 years, . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | 4 . | 3 | . . . . . | . . . . . | . . . . . |
| 11 | do. . | do. . | 5 . . . | 25 | 25 | 30 | 28 | 30 | 5 . . | 3 | 3 | 3 | 3 |
| 12 | do. . | do. . | 3 . . . | 23 | 28 | 28 | 28 | 28 | 3 . | 7 | 8 | 7 | 7 |
| 13 | do. . | do. . | 4 . . . | 25 | 30 | 30 | 30 | 30 | 3 . . | 3 | 3 | 3 | 4 |
| 14 | do. . | do. . | 3 . . . | 12 | 12 | 12 | 12 | 12 | 3 . . | 6 | 6 | 6 | 6 |
| 15 | do. . | do. . | 3 . . . | 30 | 30 | 30 | 30 | 30 | 4 . . | 7 | 4 | . . . . . | . . . . . |
| 16 | do. . | do. . | 3 . . . | 25 | 28 | 27 | 28 | 25 | 4 . . | . . . . . | . . . . . | 3 | . . . . . |
| 17 | do. . | do . | 4 . . . | 15 | 15 | . . . . . | . . . . . | . . . . . | . . . . . | 6 | . . . . . | . . . . . | . . . . . |

WORKMEN IN BUILDING TRADES.—BLAIR COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 18 | United States, | Stonemason, | 3 years, | 23 cents, | * | 30 cents, | 30 cents, | 30 cents, | 1½ months, | 4 months, | 3 months. | ..... | ..... |
| 19 | do. | Plasterer. | 3 | 11 | 11 cents, | 25 | 39 | 39 | 6 | 8 | 3 | ..... | ..... |
| 20 | do. | do. | 4 | 27 | 27 | 27 | 25 | 22 | 3 | 3 | ..... | ..... | 3 mon s, |
| 21 | do. | do. | 3 | 20 | 30 | 30 | 30 | 30 | 2 | 3 | 3 | 3 months, | 3 |
| 22 | do. | do. | 3 | 23 | 30 | 30 | 25 | 20 | 3 | 3 | 2 | 4 | 1½ |
| 23 | do. | do. | 3 | 30 | 38 | 38 | 30 | 30 | 3 | 3 | 4 | ..... | ..... |
| 24 | do. | do. | 3 | * | * | * | * | * | 2 | 3 | 3 | ..... | 3 |
| 25 | do. | do. | 3 | 12 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 26 | do. | do. | 3 | 23 | 27 | 27 | 25 | 25 | 5 | 1 | 1 | 1 | 1 |
| 27 | do. | do. | 3 | 30 | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... |
| 83 | do. | do. | 4 | 20 | 25 | 25 | 28 | 25 | 5 | 2 | ..... | ..... | ..... |
| 29 | do. | do. | 3 | 18 | 20 | 22 | 22 | 33 | ..... | ..... | ..... | ..... | ..... |
| 30 | do. | do. | 3 | 25 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 31 | do. | do. | 6 | 20 | 20 | 18 | 18 | 15 | 4 | 6 | 6 | 7 | 8 |
| 32 | do. | do. | 4 | 24 | 25 | 25 | 25 | 25 | ..... | ..... | ..... | ..... | ..... |
| 33 | do. | do. | 5 | 25 | 30 | 30 | 30 | 25 | 2 | 1 | 4 | ..... | 1 |

* Contractor.

## WORKMEN IN BUILDING TRADES.—BLAIR COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly, or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Ireland, | Bricklayer. | Weekly, | $300 00 | $800 00 | $700 00 | $700 00 | $700 00 | | Sometimes. |
| 2 | do. | do. | do. | 91 00 | 364 00 | 182 00 | 273 00 | 455 00 | United States. | No. |
| 3 | United States, | do. | do. | 120 00 | 360 00 | 360 00 | 360 00 | 360 00 | do. | No. |
| 4 | do. | do. | do. | | | | | | do. | |
| 5 | do. | do. | do. | 184 00 | 544 00 | 544 00 | 544 00 | 544 00 | do. | |
| 6 | do. | do. | Semi-monthly. | 32 50 | 260 00 | 600 00 | 550 00 | 600 00 | do. | No. |
| 7 | Ireland, | Stonemason. | Monthly, | 221 55 | 778 30 | 684 00 | 300 00 | 468 00 | Ireland. | Sometimes. |
| 8 | Scotland, | do. | do. | 69 10 | 198 00 | 240 00 | | | Scotland, | No. |
| 9 | United States, | do. | do | 155 00 | 300 00 | 350 00 | 300 00 | 300 00 | United States. | No. |
| 10 | do. | do. | | | | | | | do. | Piece |
| 11 | do. | do. | Weekly. | | | | | | do. | Sometimes |
| 12 | do. | do. | | 150 00 | 500 00 | 520 00 | 481 00 | 470 00 | do. | Piece. |
| 13 | do. | do. | | 180 00 | 600 00 | 640 00 | 582 00 | 633 00 | do. | Yes. |
| 14 | do. | do. | Monthly. | 120 00 | 300 00 | 300 00 | 300 00 | 300 00 | do. | Yes. |
| 15 | do. | do. | | 128 40 | 510 00 | | | | do | Yes |
| 16 | do. | do. | Monthly, | 100 00 | 500 00 | 500 00 | 500 00 | 450 00 | do. | Yes. |
| 17 | do. | do. | do. | 240 00 | 240 00 | 240 00 | 240 00 | 240 00 | do. | No. |
| 18 | do. | do. | do. | 60 00 | 90 00 | 325 00 | 435 00 | 434 00 | do. | |

WORKMEN IN BUILDING TRADES.—BLAIR COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 19 | United States, | Plasterer, | | | $180 00 | $155 00 | $400 00 | $640 00 | United States, | Yes. |
| 20 | do. | do. | | $429 00 | 429 00 | 858 00 | 780 00 | 345 00 | do. | No. |
| 21 | do. | do. | | | | | | | do. | Yes. |
| 22 | do. | do. | Weekly & monthly, | 70 00 | 200 00 | 780 00 | 85 00 | 100 00 | do. | Sometimes. |
| 23 | do. | do. | Semi-monthly, | 90 00 | 675 00 | 675 00 | 600 00 | 575 00 | do. | No. |
| 24 | do. | do. | Weekly, | 500 00 | 700 00 | 900 00 | 800 00 | | do. | Yes. |
| 25 | do. | do. | Monthly, | | | | | | do. | Yes. |
| 26 | do. | do. | | | | | | | do. | No. |
| 27 | do. | do. | Semi-monthly, | | | | | | do. | Yes. |
| 28 | do. | do. | Monthly, | 35 00 | 400 00 | 400 00 | 590 00 | 480 00 | do. | No. |
| 29 | do. | do. | | 100 00 | 200 00 | 350 00 | 300 00 | 350 00 | do. | Yes. |
| 30 | do. | do. | Semi-monthly, | 185 00 | | | | | do. | Sometimes. |
| 31 | do. | do. | | 200 00 | | | | | do. | Yes. |
| 32 | do. | do. | | 100 00 | 600 00 | 600 00 | 600 00 | 600 00 | do. | Yes. |
| 33 | do. | do. | | | | | | | do. | |

WORKMEN IN BUILDING TRADES—BLAIR COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Ireland, | Bricklayer, | | No difference. | Yes, | | | | 10 | Yes. | Yes. |
| 2 | do. | do. | | | Yes, | No. | No. | | 10 | No. | |
| 3 | United States, | do. | Hour, | | Yes. | No, | | | 10 | Yes. | Yes. |
| 4 | do. | do. | | | Yes, | | | | 10 | No. | |
| 5 | do. | do. | | | Yes. | | | | | | |
| 6 | do. | do. | | | Yes, | | | | 10 | No, | |
| 7 | Ireland. | Stonemason, | | No difference. | Yes, | | | | 10 | No. | |
| 8 | Scotland. | do. | | | Yes, | No machinery, | | | | No, | |
| 9 | United States, | do. | Piece, | $1.00 per day more, | Yes. | | | | 10 | No, | |
| 10 | do. | do. | Piece, | 50 to 80 cents per day more, | | | No, | | 10 | Yes, | Yes. |
| 11 | do. | do. | Piece, | 15 cents per hour more, | Yes, | No machinery. | | | 10 | Yes, | Yes. |
| 12 | do. | do. | | No difference. | Yes, | | | | 10 | Yes. | Yes. |
| 13 | do. | do. | Piece, | | Yes, | No machinery. | | | 10 | Yes, | Yes. |
| 14 | do. | do. | | | Yes. | Yes. 50 per cent., | Yes. | Lowered 60 per cent., | 10 | No, | |
| 15 | do. | do | Piece, | 15 cents per hour more, | Yes, | | | | 10 | No, | |
| 16 | do, | do. | Piece, | 30 per cent. more, | No, | | | | 10 | No, | |
| 17 | do. | do. | Hour, | 50 cents per day more, | Yes. | | | | 10 | No, | |
| 18 | do. | do. | | No difference, | Yes, | | | | 10 | No, | |

WORKMEN IN BUILDING TRADES.—BLAIR COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | United States, | Plasterer, | Piece, | | Yes, | | | | 9 & 10 | No, | |
| 20 | do. | do. | Piece, | 50 cents per day more, | Yes, | | | | 9 & 10 | No, | |
| 21 | do. | do. | Piece, | 25 per cent. more, | Yes, | No, | No, | | 10 | Yes, | Yes. |
| 22 | do. | do. | Piece, | 25 to 50 cents per day more, | Yes, | | | | 8 & 10 | No, | |
| 23 | do. | do. | Piece, | $1.00 to $2.00 per day more, | Yes, | | | | 10 | No, | |
| 24 | do. | do. | Piece, | $1.00 per day more, | No, | | No, | | 10 | Yes, | Yes. |
| 25 | do. | do. | Hour, | | | Yes, | Yes, | | 10 | No, | |
| 26 | do. | do. | Piece, | $1.00 per day more, | No, | No, | No, | | 10 | No, | |
| 27 | do. | do. | Piece, | | Yes, | | | | 10 | No, | |
| 28 | do. | do. | | | Yes, | | | | 10 | No, | |
| 29 | do. | do. | Piece, | | Yes, | | | | 10 | Yes, | Yes. |
| 30 | do. | do. | Hour, | 33 per cent. more, | Yes, | | | | 10 | No, | |
| 31 | do | do | Piece, | 50 cents per day more, | No, | | No, | | 10 | Yes, | Yes. |
| 32 | do. | do. | Piece, | 25 cents per day, | Yes, | | | | 10 | Yes, | Yes. |
| 33 | do. | do. | | | | | | | 10 | Yes, | Yes. |

## WORKMEN IN BUILDING TRADES.—WESTMORELAND COUNTY.

| Office number. | Nationality, where born. | Trade or occupation | Did you serve an apprenticeship, if so, for how long. | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment. | During what part of the years. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Germany, | Bricklayer. | 3 years, | 28 cts., | 33 cts., | 36 cts., | 36 cts., | 36 cts., | 6 months, | 0 months, | 0 months. | 0 months. | 0 months. |
| 2 | United States. | do. | 3 | 33 | 39 | 39 | 39 | 39 | 6 | ..... | ..... | ..... | 0 |
| 3 | do. | do. | 3 | 35 | 45 | 45 | 50 | 45 | 5 | 5 | 5 | 4 | 5 |
| 4 | do. | do. | 5 | 33 | 44 | 50 | 56 | 56 | 4 | 5 | 3 | 3 | 4 |
| 5 | do. | do. | 3½ | 22 | 33 | ..... | ..... | ..... | 3 | ..... | ..... | ..... | ..... |
| 6 | do. | do. | 3 | * | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 7 | do. | do. | 3 | ..... | 36 | 42 | 36 | 31 | 6 | 2 | 2 | 1 | 4 |
| 8 | do. | Plasterer. | 2 | 33 | 36 | 39 | 33 | 33 | 2 | 4 | 6 | ..... | 6 |
| 9 | do. | do. | 3 | 28 | 28 | 28 | 33 | 33 | 3 | 3 | 3 | 6 | 6 |
| 10 | do. | Slate roofer. | 3 | 28 | 33 | 44 | 44 | 39 | 6 | 2 | 2 | 2 | ..... |
| 11 | do. | do. | 3 | 28 | 28 | 28 | 28 | 28 | ..... | ..... | ..... | ..... | ..... |
| 12 | do. | do. | 5 | * | * | 28 | 32 | 17 | 3 | 3 | 3 | 3 | 3 |
| 13 | England. | Stonemason. | 2 | 28 | 33 | 39 | 39 | ..... | ..... | ..... | ..... | ..... | ..... |
| 14 | Ireland. | do. | 7 | 22 | 31 | ..... | ..... | ..... | 5 | 3 | 2 | 5 | 1 |
| 15 | do. | do. | 4 | 25 | 35 | 35 | 30 | 30 | 6 | 4 | 4 | 4 | 4 |
| 16 | England. | do. | 6 | 33 | 39 | 39 | 39 | 39 | 4 | 3 | 2 | 2 | 3 |
| 17 | United States. | do. | 3 | 25 | 33 | 39 | 33 | 33 | 6 | 0 | 0 | 0 | 0 |

* Apprenticeship just completed.

WORKMEN IN BUILDING TRADES.—WESTMORELAND COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 18 | United States, | Stonemason, | 3 years. | 30 cts., | 39 cts., | 33 cts., | 33 cts., | 33 cts., | 4 months, | 7 months, | 6 months, | 6 months, | 6 months, |
| 19 | do. | do. | 3 | 39 | 44 | 44 | 39 | 39 | 1 | 0 | 0 | 3 | 2 |
| 20 | do. | do. | 3 | 22 | 22 | †17 | †11 | †11 | 2 | 0 | ‡0 | ‡0 | ‡0 |
| 21 | do. | do. | 3 | 22 | 25 | 31 | 33 | 36 | 3 | 5 | 5 | 3 | 3 |
| 22 | do. | do. | 3 | 30 | 39 | 32 | 22 | ..... | 4 | 7 | 6 | 7 | 6 |
| 23 | do. | Tinner, | 5 | 22 | 22 | 19 | 17 | 11 | 3½ | 3 | 2 | 4 | 3 |
| 24 | do. | do. | 3 | 25 | 25 | 25 | 25 | 25 | 4 | 3 | 3 | 2 | 1½ |
| 25 | do. | do. | 3 | 26 | 26 | 26 | 26 | 26 | 3 | 3 | 3 | 3 | 3 |
| 26 | do. | do. | 5½ | 31 | 28 | 31 | 31 | ..... | 4½ | 7 | 0 | 0 | ..... |
| 27 | do. | Painter, | 3 | 30 | 28 | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... |
| 28 | do. | do. | 3 | † | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 29 | do. | do | 3 | 22 | 28 | 28 | 25 | 19 | 3 | ..... | ..... | ..... | ..... |
| 30 | do. | do. | 3 | 27 | 28 | 28 | 27 | 25 | 3 | 2 | 3 | 5 | 1 |

† Contractor. ‡ Apprentice.

## WORKMEN IN BUILDING TRADES.—WESTMORELAND COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Germany, | Bricklayer, | Weekly, | | | | | | Germany, | No. |
| 2 | United States, | do. | do. | | | | | | United States. | |
| 3 | do. | do. | do. | $94 50 | $500 00 | $550 00 | $675 00 | $550 00 | do. | No. |
| 4 | do. | do. | | 60 00 | 680 00 | 700 00 | 800 00 | 800 00 | do. | Yes. |
| 5 | do. | do. | Semi-monthly, | | | | | | do. | No. |
| 6 | do. | do. | do. | | | | | | do. | |
| 7 | do. | do. | do. | | 305 55 | 400 50 | 635 00 | 225 00 | do. | Sometimes. |
| 8 | do. | Plasterer | do. | 320 00 | 584 00 | 525 00 | 700 00 | 450 00 | do. | No. |
| 9 | do. | do. | Weekly, | 80 00 | 240 00 | 350 00 | 360 00 | 400 00 | do. | Yes. |
| 10 | do. | Slate roofer, | | | 800 00 | 750 00 | 750 00 | 750 00 | do. | Yes. |
| 11 | do. | do. | Weekly, | | | | | | do. | No. |
| 12 | do. | do. | | 300 00 | 1,000 00 | 800 00 | 600 00 | 500 00 | do. | No. |
| 13 | England, | Stonemason, | Semi-monthly, | 90 00 | 127 00 | | 132 00 | | do. | Sometimes. |
| 14 | Ireland, | do. | do. | 57 20 | 508 00 | 501 75 | 402 00 | 700 00 | Ireland, | No. |
| 15 | do. | do. | do. | | 200 00 | 200 00 | 200 00 | 200 00 | United States, | No. |
| 16 | England, | do. | Weekly, | 140 00 | 850 00 | 633 33 | 750 00 | 900 00 | England, | Yes. |
| 17 | United States, | do. | do. | | 490 00 | 600 00 | 580 00 | 620 00 | United States, | No. |
| 18 | do. | do. | | 85 44 | 221 00 | 546 00 | 309 00 | 270 00 | do. | Sometimes. |

WORKMEN IN BUILDING TRADES.—WESTMORELAND COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly. | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 19 | United States, | Stonemason, | Weekly, | $455 00 | $1,092 00 | $1,092 00 | $819 00 | $910 00 | United States, | No. |
| 20 | do. | do. | Semi-monthly, | 204 00 | 600 00 | 450 00 | 300 00 | 300 00 | do. | No. |
| 21 | do. | do. | Weekly & monthly, | 154 66 | 383 15 | 552 01 | 625 50 | 700 00 | do. | |
| 22 | do. | do | Semi-monthly. | 113 85 | 368 05 | 306 74 | 216 00 | 200 00 | do. | Sometimes. |
| 23 | do. | Tinner. | Weekly, | 150 00 | 375 00 | 378 00 | 250 00 | 175 00 | do. | No. |
| 24 | do. | do. | do. | 110 00 | 495 00 | 495 00 | 550 00 | 577 50 | do. | No. |
| 25 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | |
| 26 | do. | do. | do. | 107 25 | 324 50 | 825 00 | 825 00 | ..... | do. | No. |
| 27 | do. | Painter, | do. | 360 00 | 700 00 | ..... | ..... | ..... | do. | No. |
| 28 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | do. | |
| 29 | do. | do. | Weekly. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 30 | do. | do. | Semi-monthly, | 176 96 | 600 00 | 540 00 | 420 00 | 594 00 | do. | Sometimes. |

## WORKMEN IN BUILDING TRADES.—WESTMORELAND COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen. If so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Germany, | Bricklayer, | | No difference. | Yes. | | | | 9 | Yes, | No. |
| 2 | United States, | do. | | | No. | | | | 9 | Yes, | No. |
| 3 | do. | do. | Day, | 10 per cent. more, | Yes, | | | | 9 | No, | |
| 4 | do. | do. | Piece, | 50 per cent. more. | Yes. | | | | 9 | Yes. | No. |
| 5 | do. | do. | | | Yes, | | | | 9 | No, | |
| 6 | do. | do. | | | Yes, | | | | 9 | No. | |
| 7 | do. | do. | Piece, | 25 to 50c. more per day | Yes. | | | | 9 | No, | |
| 8 | do. | Plasterer. | | | Yes, | No. | No, | | 9 | Yes, | No. |
| 9 | do. | do. | Piece. | 50 cts. more per day, | Yes, | | | | 9 | No, | |
| 10 | do. | Slate roofer, | | | Yes, | No, | No, | | 9 & 10 | No, | |
| 11 | do. | do. | | | Yes, | Yes, | | | 9 | No, | |
| 12 | do. | do. | | | Yes, | No, | No, | | 8, 9, 10 | No, | |
| 13 | England, | Stonemason, | | No difference. | Yes. | | | | 9 | No. | |
| 14 | Ireland, | do. | Piece, | 75 cts. per day more, | Yes, | No. | No, | | 10 | No, | |
| 15 | do. | do. | Day, | | Yes, | Yes; 50 per cent., | Yes, | Lowered. | 9 | No, | |
| 16 | England. | do. | Piece, | | Yes. | No, | No, | | 9 | Yes, | No. |
| 17 | United States, | do. | | | Yes, | No. | No, | | 9 | Yes, | Yes. |
| 18 | do. | do. | | No difference. | Yes. | No. | No. | | 9 | No. | |

WORKMEN IN BUILDING TRADES.—WESTMORELAND COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | United States, | Stonemason, | ..... | No difference, ... | Yes, | No, ..... | No, ..... | ..... | 9 | No, | |
| 20 | do. | do. | ..... | No difference, ... | Yes. | No, ..... | No, ..... | ..... | 9 | Yes, | No. |
| 21 | do. | do. | ..... | ..... | Yes, | ..... | ..... | ..... | 9 | Yes, | No. |
| 22 | do. | do. | ..... | No difference, ... | Yes, | No, ..... | No, ..... | ..... | 9 | No, | |
| 23 | do. | Tinner, .. | ..... | .. ..... | No, | No, ..... | No, ..... | ..... | 9 | No, | |
| 2 | do. | do. .. | ..... | No difference, ... | .... | Yes; 50 per cent., .... | ..... | ..... | 9 | Yes, | No. |
| 25 | do. | do. .. | ..... | ..... | Yes. | No, ..... | No, ..... | ..... | 9 | Yes. | No. |
| 26 | do. | do. .. | ..... | ..... | Yes, | No. ..... | No, ..... | ..... | 9 | No, | |
| 27 | do. | Painter, .. | ..... | ..... | Yes, | No. ..... | ..... | ..... | 9 | Yes, | No. |
| 28 | do. | do. .. | ..... | ..... | Yes. | ..... | ..... | ..... | 9 | Yes, | No. |
| 29 | do. | do. .. | ..... | ..... | Yes, | ..... | ..... | ..... | 9 | No, | |
| 30 | do. | do. .. | ..... | 20 to 45c. per day more | Yes. | No. ..... | No, ..... | ..... | 9 | Yes, | No. |

## WORKMEN IN BUILDING TRADES.—BUTLER COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Stonemason, | 3 years, | 28 cts. | 36 cts. | 36 cts. | 36 cts. | 36 cts. | 3 months, | 7 months, | 7 months, | 7 months, | 7 months, |
| 2 | do. | do. | 3 | 25 | 42 | 36 | | | | | | | |
| 3 | do. | do. | 3 | 36 | 36 | 36 | 36 | 36 | 2 | | | | |
| 4 | do. | do. | 3 | 25 | 30 | 30 | 36 | 36 | 3 | 6 | 6 | | 6 |
| 5 | do. | do. | 3 | 36 | 33 | 33 | 36 | 36 | 4 | 8 | 6 | 7 | 8 |
| 6 | do. | do. | 5 | 25 | 30 | 33 | 33 | 35 | 3½ | 3½ | 3½ | 3½ | 3½ |
| 7 | do. | do. | 4 | 33 | 33 | 36 | 36 | | 3½ | 8 | | | |
| 8 | do. | do. | 3 | 33 | 36 | 36 | 36 | 36 | 3½ | 8 | 7½ | | |
| 9 | Sweden, | do. | 3 | 30 | 37 | 37 | 37 | 37 | 4 | 9 | 9 | 6 | 4 |
| 10 | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | |
| 13 | United States, | Plasterer. | 3 years. | * | | | | | 6 | | | | |
| 14 | do. | do. | 3 | 28 | | | | | 4 | | | | |
| 15 | do. | do. | 4 | 33 | 33 | 33 | 33 | 33 | 2½ | 4 | 6 | 6 | |
| 16 | do. | do. | 7 | 30 | 30 | 39 | 33 | 33 | 4 | 3 | 0 | 2 | 1 |
| 17 | | | | | | | | | | | | | |

*Contractor.

WORKMEN IN BUILDING TRADES.—BUTLER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 18 | . . . . . | . . . . . | . . . . . | cts. . | cts., . | cts., . | cts., . | cts., . | months, . . | months, | months, | months, | months, |
| 19 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 20 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 21 | United States, . | Bricklayer, . . | 3 years, . . . | 39 . | 44 . . | 44 . | 44 . | 44 . . | 3 . . | 6 | 4 | 4 | 3 |
| 22 | do. . | do. . . | 3½ . . . | 39 . . | 44 . . | 44 . . | 44 . . | 44 . . | 4 . . | 6 | 6 | 6 | 6 |
| 23 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 24 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 25 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 26 | United States, . | Painter, . . . | 3 years, . . . | 20 . . | 25 . . | 20 . . | 15 . . | 20 . . | . . | 3 | 3 | 3 | 3 |
| 27 | do . | do. . . . | 3 . . . | 23 . . | 25 . . | 25 . . | 25 . . | 25 . . | 2 . . | 4 | 4 | 4 | 4 |
| 28 | do. . | do. . . . | 3 . . . | 20 . . | 20 . . | 22 . . | 22 . . | 22 . . | 3 . . | 6 | 4 | 1 | 1 |
| 29 | do. . | do. . . . | 2½ . . . | 20 . . | 28 . . | 35 . . | 35 . . | . . . . . | 3½ . . | 2 | 1 | . . . . . | 2 |

## WORKMEN IN BUILDING TRADES.—BUTLER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States. | Stonemason. | | $218 25 | $274 50 | $307 99 | $618 50 | $1,200 00 | United States. | Yes. |
| 2 | do. | do. | Semi-monthly. | 75 00 | | | | | do. | Yes. |
| 3 | do. | do. | Weekly. | | | | | | do. | Yes. |
| 4 | do. | do. | Weekly. | 40 00 | | | | | do. | |
| 5 | do. | do. | Weekly & monthly. | 144 00 | 144 00 | 468 00 | 234 00 | 312 00 | do. | Sometimes. |
| 6 | do. | do. | | 108 00 | | | | | do. | Yes. |
| 7 | do. | do. | Semi-monthly. | 270 00 | 234 00 | | | | do. | No. |
| 8 | do. | do. | Weekly. | 188 43 | 286 00 | 313 00 | | | do. | Yes. |
| 9 | Sweden. | do. | | 125 00 | 350 00 | 350 00 | 500 00 | 700 00 | do. | No. |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | United States. | Plasterer. | | | | | | | United States. | Yes. |
| 14 | do. | do. | | 135 00 | | | | | do. | Yes. |
| 15 | do. | do. | Weekly. | 180 00 | 288 00 | 432 00 | 432 00 | 576 00 | do. | No. |
| 16 | do. | do. | Semi-monthly. | 115 00 | 600 00 | 1,000 00 | 750 00 | 790 00 | do. | Sometimes. |
| 17 | | | | | | | | | | |
| 18 | | | | | | | | | | |

WORKMEN IN BUILDING TRADES.—BUTLER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years. | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 19 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | |
| 20 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | |
| 21 | United States. . . . . | Bricklayer, . . . | Semi-monthly, . | $270 00 | $600 00 | $800 00 | $800 00 | $900 00 | United States, . . . . . | Yes. |
| 22 | do. . . . . | do. . . . | Weekly, . . . . . | 53 00 | 93 00 | 100 00 | 100 00 | 120 00 | do. . . . . | No. |
| 23 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | |
| 24 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | |
| 25 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | |
| 26 | United States, . . . . . | Painter, . . . . . | Weekly, . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | United States, . . . . . | No. |
| 27 | do. . . . . | do. . . . . | do. . . . . | 175 00 | 400 00 | 400 00 | 400 00 | 400 00 | do. . . . . | No. |
| 28 | do. . . . . | do. . . . . | do. . . . . | 100 00 | 100 00 | 300 00 | 400 00 | 400 00 | do. . . . . | No. |
| 29 | do. . . . . | do. . . . . | . . . . . | 75 00 | 100 00 | 250 00 | . . . . . | . . . . . | do. . . . . | Yes. |

WORKMEN IN BUILDING TRADES.—BUTLER COUNTY.—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Stonemason, | Piece. . . | . . . . . | No, | No, . . . . . | . . . . . | . . . . . | 9 | Yes, | No. |
| 2 | do. | do. | Day, . . | 50 per cent. more. . | Yes, | No, . . . . . | No. . . . . | . . . . . | 9 | Yes, | No. |
| 3 | do. | do. | Day, . . | 16 per cent. more, . | Yes. | . . . . . | . . . . . | . . . . . | | | |
| 4 | do. | do. | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 10 | Yes, | No. |
| 5 | do. | do. | . . . . . | . . . . . | Yes. | . . . . . | . . . . . | . . . . . | 9 | Yes, | Yes. |
| 6 | do. | do. | . . . . . | . . . . . | No. | . . . . . | . . . . . | . . . . . | 10 | No, | |
| 7 | do. | do. | Piece, . | $1 per day more, . . | Yes, | . . . . . | . . . . . | . . . . . | 9 | No, | |
| 8 | do. | do. | Piece, . . | $1.50 per day more, . | Yes. | . . . . . | . . . . . | . . . . . | 9 | No, | |
| 9 | Sweden. . . . | do. | . . . . . | . . . . . | No. | . . . . . | . . . . . | . . . . . | 9 | No, | |
| 10 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | | | |
| 11 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | | | |
| 12 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | | | |
| 13 | United States, | Plasterer, . | Piece, . . | 50 to 75c per day more. | Yes. | No. . . . . | No, . . . . . | . . . . . | 9 | No, | |
| 14 | do, | do. | . . . . . | No difference, . . . | Yes. | No, . . . . . | No, . . . . . | . . . . . | 9 | No, | |
| 15 | do. | do. | . . . . . | . . . . . | Yes. | . . . . . | Yes. . . . . | Lowered 25 per cent. . | 9 | Yes, | No. |
| 16 | do. | do. | Piece. . . | 75c per day more. . | Yes. | . . . . . | . . . . . | . . . . . | 9 & 10 | No. | |
| 17 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | | | |
| 18 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | | | |

WORKMEN IN BUILDING TRADES.—BUTLER COUNTY.—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen. If so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | | | |
| 20 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | | | |
| 21 | United States, | Bricklayer, | . . . . . | No difference, . . . | Yes, | . . . . . | . . . . . | . . . . . | 9 | Yes, | Yes, . |
| 22 | do. | do. | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 9 | No, | |
| 23 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | | | |
| 24 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | | | |
| 25 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | | | |
| 26 | United States, | Painter, . . | . . . . . | . . . . . | Yes, | . . . . . | Yes, . . . . . | Lowered, . . . . . | 10 | No, | |
| 27 | do. | do. . . | Piece, . . | . . . . . | Yes, | No, . . . . . | No, . . . . . | . . . . . | 9 | No, | |
| 28 | do. | do. . . | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 10 | No, | |
| 29 | do. | do. . . | Piece, . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 10 | No, | |

## WORKMEN IN BUILDING TRADES.—VENANGO COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long. | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment. | During what part of the years. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | England, | Bricklayer, | 3 years, | cts. | 44 cts. | 39 cts. | 39 cts. | 36 cts. | | 0 months, | 0 months, | 0 months. | |
| 2 | United States, | do. | 3 | 45 | 45 | 45 | 35 | 35 | 5 months, | 5 | 7 | 6 | |
| 3 | do. | do. | 3 | 47 | | | | | 4 | | | | |
| 4 | do. | do. | 3 | 30 | | | | | 3 | | | | |
| 5 | do. | do. | 6 | 36 | 39 | 44 | 50 | 53 | | | 4 | 3 | 3 months, |
| 6 | do. | do. | 3½ | 33 | 39 | 39 | 39 | 39 | 4 | 6 | 5 | 9 | 4 |
| 7 | do. | do. | 3 | 30 | 30 | 30 | 39 | 44 | | | | | |
| 8 | | | | | | | | | | | | | |
| 9 | Germany, | Stonemason, | 4 | 30 | 25 | 35 | 25 | 25 | 5⅝ | 11 | 5 | 7 | 5 |
| 10 | do. | do. | 3 | 35 | 35 | 35 | 35 | 35 | 3 | 6 | 5 | 6 | 6 |
| 11 | United States, | do. | 1 | 35 | 35 | 40 | 40 | 32 | | 7 | 6 | 5 | 6 |
| 12 | do. | do. | 3 | 33 | 40 | 35 | 30 | 30 | 4 | 6 | 7 | 6 | 7 |
| 13 | do. | do. | 3 | 40 | 45 | 45 | 45 | 45 | 3 | 3 | 3 | 3 | 3 |
| 14 | | | | | | | | | | | | | |
| 15 | United States, | Plasterer, | 3 | 25 | 30 | 30 | 25 | 25 | 3½ | 6 | 5 | 7 | 6 |
| 16 | do. | do. | 3 | 33 | 33 | 33 | 33 | 28 | 3 | 2 | 1 | 1 | ½ |
| 17 | | | | | | | | | | | | | |

WORKMEN IN BUILDING TRADES.—VENANGO COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 18 | United States, | Plumber, | 4 years, | 30 cts., | 30 cts., | 25 cts., | 25 cts., | 25 cts. | 1 month, | 2 months, | 0 months, | 0 months, | 0 months, |
| 19 | do. | do. | 4 | 25 | 25 | 20 | 15 | 15 | 0 | 0 | ..... | ..... | ..... |
| 20 | do. | Painter, | 3 | 20 | ..... | ..... | ..... | ..... | 6 | 0 | 0 | 0 | 0 |
| 21 | do. | do. | 3 | 30 | 30 | 30 | 30 | 30 | 6 | 0 | ..... | ..... | ..... |
| 22 | do. | do. | 3 | 33 | 33 | 28 | 28 | 28 | 6 | 6 | 6 | 6 | 6 |
| 23 | do. | do. | 3 | 28 | 28 | 28 | 22 | 22 | 4 | 6 | 6 | 6 | 6 |
| 24 | do. | do. | ..... | 33 | 33 | 33 | 33 | ..... | 3 | 4 | 4 | 4 | 4 |
| 25 | do. | do. | 3 | 28 | 28 | 28 | 28 | 22 | 2 | 2 | 0 | 3 | 3 |
| 26 | do. | do. | 2 | 17 | 14 | ..... | ..... | ..... | 3 | 5 | ..... | ..... | ..... |
| 27 | do. | do. | 3 | 28 | 28 | 28 | 28 | 28 | 3½ | 6 | 4 | 4 | 2 |
| 28 | do. | do. | 3 | 28 | 33 | 33 | 33 | 25 | 1 | 4 | 4 | 5 | 5 |
| 29 | do. | do. | 3 | 28 | 28 | 28 | 28 | 20 | 4 | ..... | ..... | ..... | ..... |

WORKMEN IN BUILDING TRADES.—VENANGO COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years. | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | England, | Bricklayer, | Weekly, | $350 00 | $700 00 | $700 00 | $700 00 | $700 00 | United States, | |
| 2 | United States, | do. | do. | 94 00 | 712 00 | 450 00 | 670 00 | 1500 00 | do. | Yes. |
| 3 | do. | do. | do. | 200 00 | | | | | do. | No. |
| 4 | do. | do. | do. | 200 00 | | | | | do. | Sometimes. |
| 5 | do. | do. | Semi-monthly, | 200 00 | 300 50 | 400 50 | 500 00 | 1000 00 | do. | Sometimes. |
| 6 | do. | do. | Weekly & monthly. | 245 00 | 300 00 | 275 00 | 250 00 | 625 00 | do. | Sometimes. |
| 7 | do. | do. | Weekly, | | | | | | do. | Yes. |
| 8 | | | | | | | | | | |
| 9 | Germany, | Stonemason, | Monthly. | 12 00 | 65 00 | 600 00 | 325 00 | 450 00 | Germany. | |
| 10 | do. | do. | Semi-monthly, | 165 00 | 330 00 | 300 00 | 330 00 | 300 00 | do. | Sometimes. |
| 11 | United States, | do. | do. | 75 00 | 400 00 | 575 00 | 700 00 | 425 00 | United States, | Yes. |
| 12 | do. | do. | Monthly. | 150 00 | 600 00 | 375 00 | 400 00 | 375 00 | do. | Yes. |
| 13 | do. | do. | | | | | | | do. | No. |
| 14 | | | | | | | | | | |
| 15 | United States, | Plasterer, | Weekly, | 172 50 | 450 00 | 500 00 | 375 00 | 300 00 | United States, | No. |
| 16 | do. | do. | do. | 225 00 | 638 00 | 800 00 | 800 00 | 775 00 | do. | No. |
| 17 | | | | | | | | | | |

WORKMEN IN BUILDING TRADES.—VENANGO COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly. | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 18 | United States, | Plumber, | Weekly, | $275 00 | ..... | ..... | ..... | ..... | United States, | No. |
| 19 | do. | do. | do. | 300 00 | ..... | ..... | ..... | ..... | do. | No. |
| 20 | do. | Painter, | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 21 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 22 | do. | do. | do. | ..... | $432 00 | $360 00 | $360 00 | $360 00 | do. | No. |
| 23 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 24 | do. | do. | do. | 225 00 | 500 00 | 500 00 | 500 00 | ..... | do. | No. |
| 25 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 26 | do. | do. | do. | 100 00 | ..... | ..... | ..... | ..... | do. | No. |
| 27 | do. | do. | do. | 100 00 | 200 00 | 300 00 | 300 00 | 300 00 | do. | Sometimes. |
| 28 | do. | do. | do. | 250 00 | 500 00 | 500 00 | 500 00 | 175 00 | do. | No. |
| 29 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |

WORKMEN IN BUILDING TRADES.—VENANGO COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If their is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | England, | Bricklayer, | | | Yes, | | | | 9 | Yes, | No. |
| 2 | United States, | do. | | | Yes, | | | | 9 | No. | |
| 3 | do. | do. | | | Yes, | | | | 9 | No. | |
| 4 | do. | do. | | | Yes, | | | | 10 | No, | |
| 5 | do. | do. | Piece. | | Yes. | | | | 9 | No, | |
| 6 | do. | do. | | | Yes. | | | | 8 & 9 | Yes, | No. |
| 7 | do. | do. | Hour. | | Yes, | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | Germany, | Stonemason, | | | | | Yes, | Lowered 20 per cent , | 10 | Yes. | No. |
| 10 | do. | do. | Piece, | 5 per cent. more, | Yes. | No. | No. | | 10 | Yes, | Yes. |
| 11 | United States, | do. | Piece, | 20 per cent. more, | Yes, | | Yes, | Lowered 25 per cent.. | 10 | Yes. | Yes. |
| 12 | do. | do. | Piece. | 10 per cent. more. | Yes. | | Yes. | Lowered 25 per cent.. | 10 | | |
| 13 | do. | do. | Hour, | | Yes, | | | | 9 | Yes, | No. |
| 14 | | | | | | | | | | | |
| 15 | United States, | Plasterer, | Piece, | 25 per cent. more. | Yes, | | | | 10 | No. | |
| 16 | do. | do. | Hour. | | Yes, | No. | No. | | 9 | Yes. | Yes. |
| 17 | | | | | | | | | | | |

WORKMEN IN BUILDING TRADES.—VENANGO COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day. | If there is a difference, state how much. | Are apprentices employed in your trade. | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent. | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | United States, | Plumber, | ..... | ..... | Yes, | No machinery, | ..... | ..... | 10 | No, | |
| 19 | do. | do. | Day, | ..... | Yes, | No, | No, | ..... | 9 & 10 | No, | |
| 20 | do | Painter, | ..... | ..... | Yes. | No, | No, | ..... | 9 | No, | |
| 21 | do. | do. | Piece, | ..... | Yes, | No, | No, | ..... | 8 & 9 | No, | |
| 22 | do. | do. | ..... | No difference, | Yes, | No, | No, | ..... | 9 | No, | |
| 23 | do. | do. | Day, | ..... | Yes. | No, | No. | ..... | 9 | No, | |
| 24 | do. | do. | ..... | No difference, | Yes, | No, | No, | ..... | 9 | No, | |
| 25 | do. | do. | ..... | No difference, | Yes, | ..... | ..... | ..... | 9 | No, | |
| 26 | do. | do. | Hour, | ..... | Yes, | No, | No, | ..... | 9 | No, | |
| 27 | do. | do. | Piece, | 25 cents per day, | Yes, | No, | No, | ..... | 9 & 10 | No, | |
| 28 | do. | do. | Piece, | $1.00 to $3.00 per day, | Yes. | No, | No. | ..... | 9 | No, | |
| 29 | do. | do. | Piece, | ..... | Yes, | ..... | ..... | ..... | 9 | Yes, | No. |

## WORKMEN IN BUILDING TRADES.—CRAWFORD COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Carpenter, | 3 years, | 22 cts., | 22 cts., | 22 cts., | 22 cts., | 22 cts., | 3 months, | 3 months, | 3 months, | 3 months, | 3 months, |
| 2 | do. | do. | 3 | 22 | 22 | 22 | 22 | 22 | 1 | 1 | 1 | ..... | ..... |
| 3 | do. | do. | 3 | 23 | 23 | 21 | 22 | 20 | 2 | ..... | ..... | ..... | ..... |
| 4 | do. | do. | 4 | 22 | 17 | 17 | ..... | ..... | 2 | 0 | 4 | 0 | 0 |
| 5 | do. | do. | Yes, | 19 | 17 | 21 | 22 | 25 | 2 | 3 | 3 | 3 | 3 |
| 6 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 7 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 8 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 9 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 10 | United States, | Painter, | 4 | 25 | 27 | 28 | 27 | 30 | 3 | 3 | 2 | 2 | 2 |
| 11 | do. | do. | 3 | * | ..... | ..... | ..... | ..... | 3 | ..... | ..... | ..... | ..... |
| 12 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 13 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 14 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 15 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 16 | United States, | Bricklayer, | 3½ | 30 | 30 | 35 | 35 | 35 | 3 | 3 | 3 | 6 | 3 |
| 17 | do. | do. | 4 | 30 | 35 | 40 | 40 | 35 | 4 | 6 | 6 | 9 | 3 |

* Contractor.

WORKMEN IN BUILDING TRADES.—CRAWFORD COUNTY—*Continued.*

| Office number. | Nationality, where born, | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 18 | United States, . | Bricklayer, . . | 3 years, . . . | 33 cts., . . | 35 cts., . . | 40 cts., . . | cts., . . . | 40 cts., . . | 3 months, . . | 5 months, | 3 months, | 3 months, | months, |
| 19 | do. . | do. . . | 3 . . . | 33 . . | 30 . . | 30 . . | . . . . . | . . . . . | 2½ . . | 6 | 6 | . . . . . | . . . . . |
| 20 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 21 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 22 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 23 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 24 | United States, . | Plasterer, . . | 1 . . . | . . . . . | . . . . . | 17 . . | 17 . . | 17 . . | 6 . . | 10 | 0 | 0 | 0 |

## WORKMEN IN BUILDING TRADES.—CRAWFORD COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, | Carpenter, | | $150 00 | | | | | United States, | No. |
| 2 | do. | do. | Semi-monthly, | 250 00 | $320 00 | $415 00 | $550 00 | $547 00 | do. | No. |
| 3 | do. | do. | Weekly, | 224 00 | | | | | do. | No. |
| 4 | do. | do. | do. | 172 15 | 200 00 | 200 00 | | | do. | Sometimes. |
| 5 | do. | do. | | 42 22 | | | 294 04 | | do. | Sometimes. |
| 6 | | | | | | | | | | |
| 7 | | | | | | | | | | |
| 8 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 | United States | Painter, | Weekly, | | | | | | United States, | Yes. |
| 11 | do. | do. | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | | | | | | | | |
| 15 | | | | | | | | | | |
| 16 | United States, | Bricklayer, | Semi monthly, | | | | | | United States. | No. |
| 17 | do. | do. | do. | | | | | | do. | Sometimes. |
| 18 | do. | do. | Weekly and semi-monthly. | 248 30 | 560 00 | 600 00 | 500 00 | 750 00 | do. | Sometimes. |

WORKMEN IN BUILDING TRADES.—CRAWFORD COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 19 | United States, . . . . | Bricklayer, . . . . | Weekly and semi-monthly. | $75 00 | $300 00 | $300 00 | . . . . . | . . . . . | United States, . . . . . | |
| 20 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | |
| 21 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | |
| 22 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | |
| 23 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | |
| 24 | United States. . . . . | Plasterer, . . . . . | Semi-monthly, . . | . . . . . | 50 00 | 345 50 | $350 00 | $350 00 | United States, . . . . . | |

WORKMEN IN BUILDING TRADES.—CRAWFORD COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Carpenter, | ..... | ..... | Yes, | No, | No, | ..... | 9 | Yes. | No. |
| 2 | do. | do. | ..... | ..... | Yes, | Yes: 33⅓ per cent., | No, | ..... | 10 | No. | |
| 3 | do. | do. | ..... | ..... | No. | ..... | ..... | ..... | 10 | No. | |
| 4 | do. | do. | Piece, | 50 cent per day more. | Yes, | ..... | Yes, | Lowered 30 per cent | 8, 9, 10 | No, | |
| 5 | do. | do. | ..... | ..... | Yes, | No, | No, | ..... | 10 | No. | |
| 6 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 7 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 8 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 9 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 10 | United States, | Painter, | ..... | ..... | Yes, | ..... | ..... | ..... | 10 | No, | |
| 11 | do. | do. | ..... | ..... | ..... | No, | ..... | ..... | 10 | No, | |
| 12 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 13 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 14 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 15 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | |
| 16 | United States, | Bricklayer, | ..... | ..... | Yes. | ..... | ..... | ..... | 10 | No, | |
| 17 | do. | do. | Piece, | ..... | Yes, | ..... | ..... | ..... | 9 & 10 | No, | |
| 18 | do. | do. | Piece, | $1.00 to $4.00 per day | Yes. | ..... | ..... | ..... | 9 & 10 | No, | |

WORKMEN IN BUILDING TRADES—CRAWFORD COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | United States, | Bricklayer, | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 10 | No, | |
| 20 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . | |
| 21 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . | |
| 22 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . | |
| 23 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . | |
| 24 | United States, | Plasterer, | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 10 | No, | |

## WORKMEN IN BUILDING TRADES.—MERCER COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment. | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Painter, | 3 years, | 25 cts. | 22 cts. | 17 cts. | 19 cts. | cts. | 3 months, | 2 months, | 4 months, | 4 months, | months, |
| 2 | do. | do. | No, | 25 | 25 | 25 | 35 | 25 | 3½ | 4 | 4 | 4 | 4 |
| 3 | do. | do. | 4 years, | 15 | 15 | 28 | 28 | 28 | 3 | 5 | 3 | 3 | 2 |
| 4 | do. | do. | 3½* | ..... | ..... | ..... | ..... | ..... | 3 | 3 | 3 | 3 | 3 |
| 5 | do. | do. | 4 | 25 | 25 | 25 | 25 | 25 | ..... | 1 | 1 | 1 | ..... |
| 6 | do | do. | 3 | 25 | 28 | ..... | ..... | ..... | 3 | 4 | ..... | ..... | ..... |
| 7 | do. | do. | 3 | 20 | 20 | 20 | 23 | 26 | 3 | 3 | 3 | 3 | 3 |
| 8 | do. | do. | 3 | 25 | 19 | 25 | 25 | ..... | 3 | 3 | 3 | 3 | 3 |
| 9 | do. | do. | 5 | 25 | 28 | 22 | 19 | 14 | 3 | 6 | 6 | 6 | 6 |
| 10 | do. | do. | 3 | 19 | 22 | 22 | 22 | 25 | 6 | ..... | ..... | ..... | ..... |
| 11 | do. | do | 4 | 19 | 19 | 19 | 18 | 18 | ..... | ..... | ..... | ..... | 3 |
| 12 | do. | do. | 3 | 26 | 26 | 26 | 26 | 26 | ..... | ..... | ..... | ..... | ..... |
| 13 | do. | do. | 4 | 28 | ..... | ..... | ..... | ..... | 3 | 6 | 6 | 6 | 6 |
| 14 | do. | do. | 2 | 28 | 28 | 28 | 28 | 25 | 1½ | 3 | 3 | 2 | 0 |
| 15 | do. | do. | 3 | 25 | 25 | 25 | 25 | 15 | 3 | 5 | 5 | 5 | 5 |
| 16 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

* Contractor.

WORKMEN IN BUILDING TRADES.—MERCER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 17 | . . . . . | . . . . . | years, . . . | cts., . | cts., . | cts., . | cts.. . | cts.. . | months, . . | months, | . . . . . | months, | month, |
| 18 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 19 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 20 | United States, . | Tinner, . . . . | 3 . . . | 20 . . | 20 . . | 20 . . | 20 . . | . . . . . | 3 . . | 6 | . . . . . | 8 | . . . . . |
| 21 | do. . | do. . . . | 7 . . . | 15 . . | 18 . . | 18 . . | 15 . . | 15 . | 2 . . | 1 | . . . . . | . . . . . | 1 |

## WORKMEN IN BUILDING TRADES—MERCER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, | Painter, | Weekly, | $50 00 | $300 00 | $200 00 | $175 00 | $100 00 | United States, | No. |
| 2 | do. | do. | | 250 00 | 300 00 | 300 00 | 300 00 | 300 00 | do | Sometimes. |
| 3 | do. | do. | Weekly, | 125 00 | 200 00 | 350 00 | 400 00 | 400 00 | do. | Yes. |
| 4 | do. | do. | | | | | | | do. | Yes. |
| 5 | do. | do. | | | 550 00 | 550 00 | 550 00 | | do. | Yes |
| 6 | do. | do. | Weekly, | | | | | | do, | Sometimes |
| 7 | do. | do. | do. | 150 00 | 450 00 | 450 00 | 450 00 | 450 00 | do. | Sometimes. |
| 8 | do. | do. | do. | 100 00 | 150 00 | 100 00 | 75 00 | 75 00 | do, | Sometimes. |
| 9 | do. | do. | do. | | | | | | do. | Sometimes. |
| 10 | do. | do. | Semi-monthly, | 45 85 | | | | | do. | |
| 11 | do. | do. | do. do. | 186 00 | | | | | do. | Sometimes. |
| 12 | do. | do. | do. do. | 55 00 | | | | | do. | |
| 13 | do. | do. | Weekly, | | 600 00 | 600 00 | 600 00 | 600 00 | do. | |
| 14 | do. | do. | Semi-monthly, | 270 00 | 540 00 | 540 00 | 600 00 | 700 00 | do. | No. |
| 15 | do. | do. | Monthly, | 150 00 | 300 00 | 200 00 | 200 00 | 200 00 | do. | No. |
| 16 | | | | | | | | | | |
| 17 | | | | | | | | | | |
| 18 | | | | | | | | | | |

WORKMEN IN BUILDING TRADES.—MERCER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly, or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 19 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 20 | United States, . . . . | Tinner, . . . . . | . . . . . | $150 00 | $150 00 | $100 00 | $178 00 | . . . . . | United States, . . . . . | No. |
| 21 | do. . . . . | do. . . . . | Weekly, . . . . . | 157 50 | 225 75 | 271 35 | 232 50 | $193 50 | do. . . . . | No. |

WORKMEN IN BUILDING TRADES.—MERCER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much? | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Painter, . . | . . . . . | . . . . . | Yes. | Yes, . . . . . | Yes. . . . . | . . . . . | 9 | No, | |
| 2 | do. | do. . . | Piece. . . | . . . . . | No, | No, . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 3 | do. | do. . . | Hour, . . | 50 per cent. more, . . | Yes. | No machinery, . . . . . | . . . . . | . . . . . | 9 & 10 | No, | |
| 4 | do. | do. . . | . . . . . | No difference. . . . | No, | No. . . . . | No. . . . . | . . . . . | . . . . | No. | |
| 5 | do. | do. . . | . . . . . | No difference, . . . | No, | . . . . . | No. . . . . | . . . . . | 9 | Yes, . | No. |
| 6 | do. | do. . . | Piece. . . | 15 to 50 cts., per day more. | Yes, | No, . . . . . | No. . . . . | . . . . . | 9 | No, | |
| 7 | do. | do. . . | . . . . . | No difference, . . . | Yes, | Yes. . . . . | Yes, . . . . . | . . . . . | 9 | Yes, . | No. |
| 8 | do. | do. . . | Hour. . . | . . . . . | Yes. | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 9 | do. | do. . . | Piece, . . | . . . . . | No. | No. . . . . | No. . . . . | . . . . . | 9 | No. | |
| 10 | do. | do. . . | . . . . . | . . . . . | Yes. | Yes, . . . . . | Yes, . . . . . | Lowered, . . . . . | 9 | No, | |
| 11 | do. | do. . . | Day, . . . | 25c. per day more. . | Yes, | Yes. . . . . | Yes, . . . . . | . . . . . | 8 & 10 | No, | |
| 12 | do. | do. . . | . . . . . | . . . . . | Yes. | . . . . . | . . . . . | . . . . . | 9 & 10 | No, | |
| 13 | do. | do. . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | | | |
| 14 | do. | do. . . | . . . . . | . . . . . | Yes. | . . . . . | . . . . . | . . . . . | 9 | Yes. | No. |
| 15 | do. | do. . . | Hour. . . | 33 per cent. more, . . | Yes. | . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 16 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . | |
| 17 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . | |

WORKMEN IN BUILDING TRADES.—MERCER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . | |
| 19 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | . . . . | . . . . | |
| 20 | United States, | Tinner, . . . | . . . . . | . . . . . | Yes, . | . . . . . | No, . . . . . | . . . . . | 10 | No, | |
| 21 | do. | do. . . . | Piece, . . | 50c. per day more, . | Yes, . | No, . . . . . | No, . . . . . | . . . . . | 10 | No, | |

## WORKMEN IN BUILDING TRADES.—ERIE COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment. | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Germany, | Carpenter,* | 3 years, | 12 cts. | 12 cts. | 12 cts. | 12 cts | 12 cts. | 3 months, | months. | months, | months. | months, |
| 2 | Holland, | do. | 4 | 25 | 25 | 30 | 22 | 20 | 1 | 1 | 1 | 1 | 1 |
| 3 | United States. | do. | No, | 22 | 22 | 22 | 22 | 22 | 5¾ | | | | |
| 4 | do. | do. | No, | 20 | 20 | 20 | 15 | | | | | | |
| 5 | do. | do. | 3 | 25 | | | | | | | | | |
| 6 | do. | do. | 3 | 25 | 25 | 27 | 27 | 30 | | | | | |
| 7 | do. | do. | 3 | 15 | 12 | 10 | | | 2 | 4 | 2 | | |
| 8 | do. | do. | 7 | 20 | 20 | 20 | 20 | 25 | 1½ | | | | |
| 9 | do. | Stonemason, | 4 | 28 | 35 | 40 | 35 | 35 | 3 | 2 | 1 | 2 | |
| 10 | England, | do. | 3 | 30 | 35 | 35 | 35 | 35 | 0 | 3 | 3 | 3 | 3 |
| 11 | United States, | do. | 3 | 30 | 35 | 35 | 35 | 35 | 0 | 2 | 2 | 2 | 2 |
| 12 | do. | Bricklayer, | 4 | 43 | 45 | 45 | 45 | 40 | 3 | 1 | 1 | 1 | 1 |
| 13 | do. | do. | 2 | 43 | 45 | 45 | 45 | 40 | 2 | | | | |
| 14 | do. | Tinner, | No. | 35 | | | | | 0 | | | | |
| 15 | do. | do. | 3 | 25 | 25 | 25 | 25 | 25 | 0 | 0 | 0 | 0 | 0 |
| 16 | do. | do. | 3 | | | | | | | | | | |
| 17 | do. | Painter. | 3 | 31 | 25 | 19 | 16 | | | | | | |

* Fine wood worker.

WORKMEN IN BUILDING TRADES.—ERIE COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 18 | United States, | Painter. | No, | 15 cts. | 20 cts. | cts. | cts. | cts. | 4 months, | 6 months, | 4 months, | 4 months, | 4 months, |
| 19 | do. | do. | 3 | 20 | 22 | 20 | 18 | 15 | 1 | 4 | ..... | ..... | ..... |
| 20 | do. | do. | 3 | 20 | 20 | 20 | 18 | 15 | 0 | 0 | 0 | 0 | 0 |
| 21 | do. | do. | 3 | 25 | 25 | 25 | 25 | 25 | ..... | ..... | ..... | ..... | ..... |
| 22 | do. | do. | 4 | 22 | 22 | 22 | 22 | 22 | 0 | 3 | 3 | 3 | 3 |
| 23 | do. | do. | 4 | 22 | 22 | 20 | 20 | 25 | 0 | 0 | 0 | 0 | 0 |
| 24 | do. | do. | 3 | 20 | 19 | 17 | 14 | 11 | 2 | 1 | ..... | 2 | 2 |
| 25 | England, | do. | 3 | 22 | 22 | 22 | 22 | 22 | 2½ | 1½ | ..... | ..... | ..... |
| 26 | do. | do. | 1½ | 20 | 20 | 25 | 25 | 25 | 0 | 4 | 2 | 2 | ..... |

WORKMEN IN BUILDING TRADES.—ERIE COUNTY—*Continued.*

| Office hours. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly. | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve an apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Germany, | Carpenter,* | Weekly, | | | | | | Germany, | No. |
| 2 | Holland, | do. | do. | $250 00 | $300 00 | $450 00 | $300 00 | $300 00 | France. | No. |
| 3 | United States, | do. | do. | | | | | | | No. |
| 4 | do. | do. | do | | | | | | | Yes. |
| 5 | do. | do. | | 315 00 | | | | | United States, | |
| 6 | do. | do. | Weekly, | | | | | | do. | |
| 7 | do. | do. | do. | | | | | | do. | |
| 8 | do. | do. | Monthly, | | | | | | do. | |
| 9 | do. | Stonemason, | Semi-monthly, | 250 00 | | | | | do. | No. |
| 10 | England, | do. | Weekly, | 350 00 | 600 00 | 600 00 | 600 00 | 600 00 | do. | Sometimes. |
| 11 | United States, | do. | do. | 300 00 | 500 00 | 500 00 | 500 00 | 500 00 | do. | Yes. |
| 12 | do. | Bricklayer. | do. | 100 00 | | | | | do. | |
| 13 | do. | do | do. | | | | | | do. | |
| 14 | do. | Tinner. | do. | | | | | | | No. |
| 15 | do. | do. | do. | 375 00 | 750 00 | 750 00 | 750 00 | 750 00 | United States, | No. |
| 16 | do. | do. | do. | | | | | | do. | No. |
| 17 | do. | Painter, | | 375 00 | 600 00 | 450 00 | | | do. | |

* Fine wood worker.

WORKMEN IN BUILDING TRADES.—ERIE COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly. | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 18 | United States, | Painter, | | $100 00 | $250 00 | | | | United States, | No. |
| 19 | do. | do. | Weekly, | 200 00 | 400 00 | $400 00 | $350 00 | $350 00 | do. | No. |
| 20 | do. | do. | Semi-monthly. | 300 00 | 600 00 | 500 00 | 500 00 | 450 00 | do. | Yes. |
| 21 | do | do. | | | | | | | do. | |
| 22 | do. | do. | Weekly, | | | | | | do. | No. |
| 23 | do. | do. | do. | 325 00 | 650 00 | 574 00 | | | do. | |
| 24 | do. | do | do. | 200 00 | 475 00 | 425 00 | 375 00 | 300 00 | do. | No. |
| 25 | England, | do. | do. | 100 44 | 200 15 | 200 85 | 200 88 | 200 88 | England and U. S., | No. |
| 26 | do. | do. | do. | 140 00 | 400 00 | 470 00 | 500 00 | 650 00 | England, | No. |

WORKMEN IN BUILDING TRADES.—ERIE COUNTY—*Continued.*

| Office number. | Nationality. where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day. | If there is a difference, state how much. | Are apprentices employed in your trade. | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent. | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Germany, . . . | Carpenter,* | Day, . . | . . . . . | No, . | . . . . . | Yes, . . . . . | Lowered 25 cts per day | 10 | Yes, | No. |
| 2 | Holland, . . . | do. | Piece. . . | 5 per cent. more, . . | Yes. . | Yes, 50 per cent., . . . . | No. . . . . | . . . . . | 8 | No. | |
| 3 | United States. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 4 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 5 | do. | do. | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 6 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 7 | do. | do. | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 10 | | |
| 8 | do. | do | . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 9 | do. | Stonemason. | Day | . . . . . | Yes. . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | No. |
| 10 | England, . . . | o. | Piece | . . . . . | Yes. . | . . . . . | . . . . . | . . . . . | 9 & 10 | Yes, . | No. |
| 11 | United States. | do. | Piece. . . | Very little more. . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 & 10 | Yes, . | No. |
| 12 | do. | Bricklayer. | . . . . . | . . . . . | Yes. . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 13 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | Yes. . | No. |
| 14 | do. | Tinner. | . . . . . | . . . . . | Yes. . | . . . . . | . . . . . | . . . . . | 10 | | |
| 15 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 16 | do. | do. . . | Day, . | . . . . . | No. . | No. . . . . | No, . . . . . | . . . . . | 10 | No. | |
| 17 | do. | Painter. . . | . . . . . | . . . . . | Yes. . | . . . . . | . . . . . | . . . . . | 8 | | |

* Fine wood worker.

WORKMEN IN BUILDING TRADES.—ERIE COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn the most, working by the piece, hour or day? | If there is a difference state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | United States, | Painter, . . | . . . . . | . . . . . | Yes, . . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 19 | do. | do. . . | . . . . . | No difference, . . . | Yes, . . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 20 | do. | do. . . | . . . . . | . . . . . | Yes, . . | No, . . . . . | . . . . . | . . . . . | 10 | No. | |
| 21 | do. | do. . . | . . . . . | . . . . . | Yes, . . | . . . . . | . . . . . | . . . . . | 10 | Yes, . . | No. |
| 22 | do. | do. . . | . . . . . | . . . . . | Yes, . . | . . . . . | . . . . . | . . . . . | 9 | Yes, . . | No. |
| 23 | do. | do. . . | . . . . . | . . . . . | Yes, . . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 24 | do. | do . . | Day, . . | . . . . . | Yes, . . | No, . . . . . | No, . . . . . | . . . . . | 9 & 10 | No. | |
| 25 | England, . . . | do. . . | . . . . . | . . . . . | No, . . | . . . . . | . . . . . | . . . . . | 9 | Yes, . . | No. |
| 26 | do. | do. . . | Piece, . . | 50 cts. to $1 p. d. more | Yes, . . | . . . . . | No, . . . . . | . . . . . | 9 | No. | |

## WORKMEN IN BUILDING TRADES.—PITTSBURG.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Stonemason, | 3 years. | 35 cts. | 40 cts. | cts. | cts. | cts. | 3 months, | 2 months, | months. | months, | months, |
| 2 | Ireland, | do. | 6½ | 35 | 42 | 40 | 38 | 36 | 3½ | 2 | 3½ | 3½ | 4 |
| 3 | do. | do. | 5 | 35 | 42 | 40 | 38 | 36 | 1½ | 1 | 3 | 2 | 3 |
| 4 | do. | do, | 5 | 35 | 42 | 42 | 40 | ..... | 2 | 3 | 3 | 3 | 3 |
| 5 | Scotland, | do. | 5 | 35 | 42 | 40 | 39 | 36 | 2½ | 3 | 4 | 5 | 3 |
| 6 | England, | do. | 7 | * | 42 | 40 | 39 | 36 | 5 | 5 | 4 | 10 | 4 |
| 7 | do. | do. | 4 | 35 | 42 | 39 | 36 | 36 | 5 | 7 | 10 | 4 | 4 |
| 8 | do. | do. | 7 | 35 | 42 | 40 | 40 | 36 | 4 | ..... | ..... | ..... | ..... |
| 9 | Austria, | do. | 4 | 35 | 42 | 40 | 40 | 39 | 4 | 3 | 1 | ..... | ..... |

*Contractor.

WORKMEN IN BUILDING TRADES.—PITTSBURG—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States. . . . . | Stonemason, . . . | Semi-monthly. . . | $110 00 | $240 00 | . . . . . | . . . . . | . . . . . | United States. | |
| 2 | Ireland, . . . . . | do. . . . | do. . . | 157 50 | 756 00 | $684 00 | $649 82 | $518 40 | Ireland. | |
| 3 | do. . . . . | do. . . . | do. . . | 311 85 | 910 98 | 712 80 | 752 40 | 641 52 | do. | |
| 4 | do. . . . . | do. . . . | do. . . | 500 00 | 700 00 | 750 00 | 775 00 | 675 00 | do. . . . . | No. |
| 5 | Scotland, . . . . . | do. . . . | do. . . | 220 50 | 680 40 | 570 00 | 491 40 | 567 00 | Scotland. | |
| 6 | England, . . . . . | do. . . . | do. . . | 36 00 | 529 20 | 576 00 | 154 44 | 518 40 | England. | |
| 7 | do. . . . . | do. . . . | do. . . | 69 30 | 415 80 | 154 44 | 518 40 | 544 32 | United States, . . . . . | No. |
| 8 | do. . . . . | do. . . . | do. . . | 120 00 | 500 00 | 600 00 | 550 00 | 500 00 | England, . . . . . | No. |
| 9 | Austria. . . . . | do. . . . | do. . . | 50 00 | 50 00 | 200 00 | 200 00 | 325 00 | Austria. | |

WORKMEN IN BUILDING TRADES.—PITTSBURG—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Stonemason, | Hour, | | Yes, | | | | 9 | No, | |
| 2 | Ireland, | do. | | | Yes, | | | | | No, | |
| 3 | do. | do. | | | Yes, | | | | 9 | Yes, | No. |
| 4 | do. | do. | | | Yes, | No. | Yes. | | 9 | Yes, | No. |
| 5 | Scotland. | do. | | | | | | | | No, | |
| 6 | England, | do. | | | Yes, | | | | 9 | No, | |
| 7 | do. | do. | Day, | | Yes, | No | No. | | 9 | No, | |
| 8 | do. | do. | | | Yes, | | | | 9 | Yes, | No. |
| 9 | Austria. | do. | | | Yes, | | | | 9 | No, | |

## WORKMEN IN BUILDING TRADES.—BLAIR COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | England, | Painter, | 7 years | 22 cts. | 22 cts. | 22 cts. | 22 cts. | 22 cts. | 3 months, | 4 months, | 3 months, | 4 months, | 5 months, |
| 2 | United States, | do. | 3 | 22 | 22 | 22 | 22 | 20 | 4½ | 9 | 9 | 4 | ..... |
| 3 | do. | do. | 3 | 20 | 20 | 20 | 20 | 20 | 5 | 3 | 1½ | 0 | 3 |
| 4 | do. | do. | 3 | 20 | 20 | 25 | 25 | ..... | 3 | 3 | 3 | ..... | ..... |
| 5 | do. | do. | 3½ | 20 | 20 | 22 | 32 | 20 | 3 | ..... | ..... | ..... | 2 |
| 6 | do. | do. | 3 | 20 | 20 | 25 | 25 | 25 | 3 | 3 | 3 | 3 | ..... |
| 7 | do. | do. | 3 | 18 | 18 | 18 | 18 | 18 | 1¼ | 1¼ | 0 | ½ | 1¼ |
| 8 | do. | do. | 4 | 21 | 20 | 20 | 18 | 15 | 1½ | 8½ | 8 | 7 | 9 |
| 9 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 10 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 11 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 12 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 13 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 14 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 15 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 16 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 18 | United States. | Tinner, . . . . | 3 years, . . . | 22 cts., . . | 22 cts., . . . | 20 cts., . . | 20 cts., . . . | 20 cts. . . | 0 | 0 | 0 | 0 | 0 |
| 19 | do. | do. . . . . | 3 . . . | 18 . . | 18 . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |

WORKMEN IN BUILDING TRADES.—BLAIR COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | England, | Painter. | | $100 00 | $320 00 | $400 00 | $375 00 | $250 00 | England, | Sometimes. |
| 2 | United States, | do. | | 90 00 | | | | | United States, | No. |
| 3 | do. | do. | Monthly. | 180 00 | 360 00 | 400 00 | 340 00 | 420 00 | do. | No. |
| 4 | do. | do. | do. | 92 00 | 162 90 | 182 00 | | | do. | |
| 5 | do. | do. | do. | | | 187 46 | 145 30 | 171 84 | do. | No. |
| 6 | do. | do. | do. | 175 00 | 400 00 | 450 00 | 450 00 | 450 00 | do. | No. |
| 7 | do. | do. | do. | 270 00 | 600 00 | 660 00 | 620 00 | 600 00 | do. | Yes. |
| 8 | do. | do. | do. | 50 00 | 375 00 | 390 00 | 350 00 | 300 00 | do. | No. |
| 9 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 | | | | | | | | | | |
| 15 | | | | | | | | | | |
| 16 | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | |
| 18 | United States, . . . . | Tinner. . . . . | Semi-monthly, . . | 275 00 | 550 00 | 475 00 | 475 00 | 475 00 | United States, . . . . . | | No. |
| 19 | do. . . . . | do. . . . . | Monthly, . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | | No. |

WORKMEN IN BUILDING TRADES.—BLAIR COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | England, | Painter, | Piece, | 3 to 10 cts., per hour more. | Yes, | No. | No, | | 10 | No, | |
| 2 | United States, | do. | | | Yes, | No machinery, | | | 10 | No. | |
| 3 | do. | do. | Piece, | | Yes, | | | | 10 | No, | |
| 4 | do. | do. | Piece, | 15 per cent. more, | Yes, | | | | 10 | No. | |
| 5 | do. | do. | Piece, | 10 per cent. more. | Yes. | | | | 10 | No, | |
| 6 | do. | do. | Piece, | 10 per cent. more, | Yes, | | | | 10 | Yes, | No. |
| 7 | do. | do. | Piece, | 33 per cent. more, | Yes, | No machinery, | | | 8 to 10 | Yes, | Yes. |
| 8 | do. | do. | | | Yes, | | | | 10 | No, | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 16 | | | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 17 | ..... | ..... | ..... | ..... | .... | ..... | ..... | .... | .... | .... |
| 18 | United States, | Tinner, . . | Piece, . . | $1.50 more per day. . | Yes, . | No. ..... | No, ..... | 10 | Yes | No. |
| 19 | do. | do. . . | ..... | ..... | do. . | ..... | No, ..... | 10 | No, | |

## WORKMEN IN BUILDING TRADES.—CAMBRIA COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Germany, | Bricklayer, | 3 years, | 35 cts. | 35 cts. | 35 cts. | 35 cts. | 35 cts. | 4 months, | 2 months, | 2 months, | 2 months, | 2 months, |
| 2 | United States, | do. | 4 | 30 | 35 | 35 | 32 | 40 | 1 | 1 | 1 | 1 | 1 |
| 3 | do. | do. | 2 | 27 | 27 | 30 | 35 | 35 | 5 | 4 | 4 | 4 | 4 |
| 4 | do. | do. | 3 | 27 | 35 | 35 | 35 | 35 | 5½ | 9 | 6 | 3 | 4 |
| 5 | do. | do. | 3 | 30 | 35 | 35 | 35 | 35 | 5 | 4 | 2 | 2 | 2 |
| 6 | Germany, | Stonemason, | No, | 20 | 25 | 30 | 30 | 30 | 3 | 4 | 4 | 4 | 4 |
| 7 | United States, | do. | 1 | 20 | 25 | 25 | 25 | 25 | 2 | 4 | 4 | 4 | 4 |
| 8 | do. | do. | Yes, | ..... | 30 | 30 | 30 | 30 | ..... | 3 | 3 | 3 | 3 |
| 9 | do. | do. | 2 | 25 | 30 | 30 | 30 | 32 | ..... | ..... | ..... | ..... | ..... |
| 10 | do. | do. | No, | ..... | ..... | ..... | ..... | ..... | 0 | 0 | 0 | 0 | ..... |
| 11 | do. | Tinner, | 3 | 25 | 25 | 27 | 25 | 23 | 0 | 0 | 0 | 0 | 0 |
| 12 | do. | do. | 3 | 15 | 12 | 11 | 10 | 10 | ..... | 1 | ..... | 4 | 4 |
| 13 | do. | Slate roofer, | 3 | 30 | 30 | 30 | 30 | 30 | 3 | 3 | 3 | 3 | 3 |
| 14 | do. | Painter, | 3 | 16 | 17 | 17 | 18 | 23 | 3 | 3 | 1 | 2 | 0 |
| 15 | do. | do. | 8 | 19 | 20 | 22 | 22 | 22 | 0 | 0 | 0 | 0 | 0 |

WORKMEN IN BUILDING TRADES.—CAMBRIA COUNTY—*Continued.*

| Office number. | Nationality, where born | Trade or occupation. | Are you paid weekly, monthly or semi-monthly. | What was your total compensation from your employment for the six months ending June 30, 1894. | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Germany, | Bricklayer, | Weekly, | ..... | ..... | ..... | ..... | ..... | Germany, | Sometimes. |
| 2 | United States, | do. | do. | $216 00 | $350 00 | $350 00 | $216 00 | $576 00 | United States, | No. |
| 3 | do. | do. | Semi-monthly, | 20 00 | 40 00 | 40 00 | 50 00 | 75 00 | do. | No. |
| 4 | do. | do. | do. | 55 00 | 275 00 | 525 00 | ..... | 700 00 | do. | Sometimes. |
| 5 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 6 | Germany, | Stonemason, | do. | 150 00 | 190 00 | 230 00 | 230 00 | 230 00 | ..... | Sometimes. |
| 7 | United States, | do. | ..... | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 8 | do. | do. | ..... | ..... | 160 00 | 100 00 | 100 00 | 100 00 | do | Sometimes. |
| 9 | do. | do. | Weekly & monthly, | 200 00 | ..... | ..... | ..... | ..... | do. | Yes. |
| 10 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | Yes. |
| 11 | do. | Tinner, | Weekly, | 390 00 | 780 00 | 858 00 | 780 00 | 702 00 | United States, | No. |
| 12 | do. | do. | do | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 13 | do | Slate roofer, | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 14 | do. | Painter, | Semi monthly, | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 15 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |

WORKMEN IN BUILDING TRADES.—CAMBRIA COUNTY—*Continued.*

| Office number. | Nationality. where born. | Trade or occupation. | In which way can you earn the most, working by the piece, hour or day? | If there is a difference state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Germany, . . | Bricklayer. | Piece, . | 33 per cent. more, . | Yes, | . . . . . | . . . . . | Lowered hod carriers, | 10 | No, | |
| 2 | United States, | do. | Piece, . | 50c. per day more, . | Yes, | Yes, hod carriers, . . . . | Yes. . . . . | Lowered 20 per cent., | 10 | No, | |
| 3 | do. | do. | Piece, . | 50c. per day more. . | Yes, | Yes, . . . . . | Yes, . . . . . | . . . . . | 10 | No, | |
| 4 | do. | do. | Piece, . | 10 per cent. more, . | Yes, | . . . . . | . . . . . | . . . . . | 10 | No, | |
| 5 | do. | do. | . . . . . | . . . . . | Yes. | . . . . . | . . . . . | . . . . . | 10 | No, | |
| 6 | Germany, . . . | Stonemason, | Piece, . | 50c. per day more, . | No. | . . . . . | . . . . . | . . . . . | 10 | No, | |
| 7 | United Seates, | do. | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 10 | No, | |
| 8 | do. | do. | Day, . . | 50c. per day more, . | Yes, | No, . . . . . | No, . . . . . | . . . . . | No. | | |
| 9 | do. | do. | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | Lowered, . . . . . | 10 | Yes, | Yes. |
| 10 | do. | do. | Piece, . | 40 per cent. more, . | . . . . | . . . . . | Yes, . . . . . | . . . . . | 8 & 10 | Yes, | No. |
| 11 | do. | Tinner, . . | . . . . . | . . . . . | Yes, | No, . . . . . | No, . . . . . | . . . . . | 10 | Yes, | No. |
| 12 | do. | do. . . | Piece, . | 50c. per day more, . | No, | . . . . . | . . . . . | . . . . . | 10 | No, | |
| 13 | do. | Slatcroofer, | . . . . . | No difference, . . . | Yes, | No machinery, . . . . . | . . . . . | . . . . . | 10 | No, | |
| 14 | do. | Painter, . . | . . . . . | . . . . . | Yes, | No machinery. . . . . | . . . . . | . . . . . | 8 & 10 | No, | |
| 15 | do. | do. . . | Piece. . | 50 per cent. more, . | No, | No, . . . . . | No, . . . . . | . . . . . | 10 | Yes, | No. |

## WORKMEN IN BUILDING TRADES.—LAWRENCE COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Wales, | Bricklayer. | 4 years. | 40 cts. | 40 cts. | 40 cts. | 40 cts. | cts. | 6 months. | months. | months. | months. | months. |
| 2 | United States, | do. | 3 | 45 | 45 | 45 | 45 | 45 | 4 | 7 | 2 | 4 | 5 |
| 3 | do. | do. | 3 | 44 | 44 | 44 | 44 | 44 | 4½ | 7 | 7 | 8 | 7½ |
| 4 | do. | do. | 3 | 44 | 44 | 44 | 44 | 39 | 6 | ..... | ..... | ..... | 4 |
| 5 | do. | do. | 3 | 44 | 44 | 44 | 44 | 44 | 2 | 3 | 3 | 4 | 5 |
| 6 | do. | do | 3 | 44 | 44 | 44 | 44 | 44 | 3 | ..... | ..... | ..... | ..... |
| 7 | do. | do. | 3 | 44 | 44 | 44 | 44 | 44 | 1 | 2 | 1 | 1 | 1 |
| 8 | do. | Stonemason, | 3 | 33 | 33 | 35 | 36 | 36 | 1 | ..... | ..... | ..... | ..... |
| 9 | do. | do. | 2½ | 25 | 33 | 36 | 33 | 28 | 4 | 3 | 2 | 2 | 4 |
| 10 | do. | do. | 3 | 30 | 40 | 40 | 40 | 40 | 3 | 3 | 3 | 3 | 3 |
| 11 | do. | do. | 3 | ..... | 27 | 30 | ..... | ..... | ..... | 6 | 6 | 4 | ..... |
| 12 | Ireland. | do. | 7 | 25 | 50 | 28 | 33 | 36 | 3 | 3 | 3 | 3 | 3 |
| 13 | United States. | Slate roofer. | 2 | 28 | 22 | 19 | 17 | 17 | 5 | 4 | 4 | 4 | ..... |
| 14 | do. | do. | 3 | 28 | 25 | 25 | 20 | 18 | 3 | ..... | ..... | ..... | ..... |
| 15 | do. | Painter. | 3 | 25 | 25 | 28 | 28 | 28 | 3 | 6 | 6 | ..... | ..... |
| 16 | do. | do. | 2½ | 28 | 31 | 28 | 28 | 28 | 4 | 3 | 3 | 3 | 3 |
| 17 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... |

## WORKMEN IN BUILDING TRADES.—CAMBRIA COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 18 | United States, . | Painter, . . . | 3 years, . . . | 28 cts., . . | 28 cts., . . | 28 cts . . . | 22 cts . . . | 22 cts., . . | 4 months, . . | 6 months, | 6 months. | 4 months, | 5 months. |
| 19 | do. . | do. . . . | 3 . . . | 28 . . | 28 . . | 22 . . | 18 . . | 18 . . | 6 . . | 3 | 6 | 3 | 2 |
| 20 | do. . | Paper hanger. | 4 . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | 1 . . | . . . . . | . . . . . | . . . . . | . . . . . |

## WORKMEN IN BUILDING TRADES.—LAWRENCE COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years. | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Wales, | Bricklayer, | Semi-monthly, | ..... | $400 00 | $500 00 | $600 00 | ..... | ..... | No. |
| 2 | United States, | do. | do. | $200 00 | 300 00 | 100 00 | 425 00 | $250 00 | United States, | No. |
| 3 | do. | do. | do. | 75 00 | 500 00 | 500 00 | 400 00 | 450 00 | do. | No. |
| 4 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | |
| 5 | do. | do. | Weekly and semi-monthly. | 175 00 | 350 00 | 450 00 | 350 00 | 287 00 | do. | No. |
| 6 | do. | do. | Semi-monthly, | 300 00 | ..... | ..... | ..... | ..... | do. | |
| 7 | do. | do. | do. | 228 61 | 460 80 | 496 50 | 525 00 | 560 00 | do. | |
| 8 | do. | Stonemason. | do. | 105 50 | 335 00 | 386 00 | ..... | ..... | do. | No. |
| 9 | do. | do. | do. | 62 00 | 287 00 | 361 00 | 312 00 | 168 00 | do. | Sometimes. |
| 10 | do. | do. | do. | 160 00 | 225 00 | 225 00 | 225 00 | 215 00 | do. | |
| 11 | do. | do. | Weekly, | 200 00 | 250 00 | 300 00 | ..... | ..... | do. | Yes. |
| 12 | Ireland, | do. | Contract, | 78 25 | 225 00 | 225 00 | 225 00 | 225 00 | Scotland, | Yes. |
| 13 | United States, | Slate roofer, | Weekly, | 50 00 | ..... | ..... | ..... | ..... | United States. | No |
| 14 | do. | do. | do. | 175 00 | ..... | ..... | ..... | ..... | do. | No. |
| 15 | do. | Painter, | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 16 | do. | do. | do. | 120 00 | 540 00 | 540 00 | 540 00 | 540 00 | do. | No. |
| 17 | do. | do. | ..... | 200 00 | ..... | ..... | ..... | ..... | do. | |

WORKMEN IN BUILDING TRADES.—LAWRENCE COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 18 | United States, . . . . | Painter. . . . . | Weekly, . . . . . | $130 00 | $360 00 | $360 00 | $192 00 | $240 00 | United States, . . . . . | No. |
| 19 | do. . . . . | do. . . . . | do. . . . . | . . . . . | 180 00 | 288 00 | 126 00 | 84 00 | do. . . . . | No. |
| 20 | do. . . . . | Paper hanger, . . | . . . . . | 300 00 | 300 00 | 450 00 | 500 00 | 500 00 | do. . . . . | Yes. |

WORKMEN IN BUILDING TRADES.—LAWRENCE COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages. | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Wales, | Bricklayer, | | | Yes, | | | | | Yes, | No. |
| 2 | United States. | do. | Hour. | 25 per cent. more. | Yes, | No, | No. | | 9 | Yes. | No. |
| 3 | do. | do. | | | Yes. | | | | 9 | No, | |
| 4 | do. | do. | | | Yes. | | | | 9 | Yes, | No. |
| 5 | do. | do. | Piece, | 33 per cent. more. | Yes, | | | | 9 | Yes, | No. |
| 6 | do. | do. | | | Yes. | | | | 9 | Yes. | Yes. |
| 7 | do. | do. | | | Yes, | | | | 9 | Yes. | No. |
| 8 | do. | Stonemason, | | | Yes. | | | | 9 | No, | |
| 9 | do. | do. | Piece, | 10 per cent. more, | Yes, | | | | 9 | Yes, | No. |
| 10 | do. | do. | | | Yes. | No. | No. | | 9 | No, | |
| 11 | do. | do. | | | Yes, | | | | | | |
| 12 | Ireland. | do. | | No difference, | Yes, | No. | No. | | 9 | No, | |
| 13 | United States, | Slate roofer, | | | Yes. | No. | | | 9 | No, | |
| 14 | do. | do. | | | Yes. | No. | No, | | 9 | No, | |
| 15 | do. | Painter. | | No difference, | Yes, | | | | 9 | Yes, | No. |
| 16 | do. | do. | | | Yes. | | | | 9 | No, | |
| 17 | do. | do. | | | Yes, | | | | 9 | Yes, | No. |

WORKMEN IN BUILDING TRADES.—LAWRENCE COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | United States, | Painter, . . | Day, . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 9 | No, | |
| 19 | do. | do. | Day, . . | . . . . . | Yes, | No, . . . . . | Yes, . . . . . | Lowered, . . . . . | 9 | No, | |
| 20 | do. | Paperhanger | Piece, . . | . . . . . | No, | . . . . . | . . . . . | . . . . . | 12 | Yes, | No. |

## WORKMEN IN BUILDING TRADES.—BEAVER COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long. | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment. | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States. . | Painter, . . . | 3 years, . . . | 25 cts., . . | 32 cts., . . | 32 cts. . . | 32 cts., . . | 32 cts., . . | months, . . | months, | months, | months, | months, |
| 2 | do. . | do. . . . | 3 . . . | 25 . . | 31 . . | 31 . . | 31 . . | 31 . . | 3 | . . . . . | . . . . . | . . . . . | . . . . . |
| 3 | do. . | do. . . . | 3 . . . | 31 . . | 31 . . | 31 . . | 31 . . | 25 . . | 6 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 4 | do. . | Plasterer, . . | 4 . . . | 33 . . | 33 . . | 33 . . | 33 . . | 33 . . | . . . . . | 2 | 2 | 2 | 2 |
| 5 | do. . | Slate roofer. . | 3 . . . | 25 . . | 25 . . | 17 . . | 17 . . | 17 . . | 3 . . | 5 | 5 | 5 | 5 |

WORKMEN IN BUILDING TRADES.—BEAVER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, | Painter. | Weekly, | ..... | $480 00 | $520 00 | $480 00 | ..... | United States, | No. |
| 2 | do. | do. | do. | $90 00 | 640 00 | ..... | ..... | ..... | do. | No. |
| 3 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | |
| 4 | do. | Plasterer, | do. | 120 00 | 480 00 | 480 00 | 480 00 | $480 00 | do. | No. |
| 5 | do. | Slate roofer. | do. | 175 50 | 351 00 | 234 00 | 234 00 | 234 00 | do. | No. |

WORKMEN IN BUILDING TRADES—BEAVER COUNTY——*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Painter, . . | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 9 | No, | |
| | do. | do. . . | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 9 | Yes, | Yes. |
| | do. | Plasterer, . | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 9 | Yes, | No. |
| 4 | . . . . . | . . . . . | Piece, . . | Very le more, . . | Yes, | No machinery, . . . . . | . . . . . | . . . . . | 9 | No, | |

## WORKMEN IN BUILDING TRADES.—LANCASTER COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, . | Bricklayer, . . | 9 years, . . . | 30 cents, | 30 cents, | 30 cents, | 41 cents, | 41 cents, | 0 months, . . | 0 months, | 0 months, | months, | 0 months. |
| 2 | do. . | do. . . | 4 . . . | 30 | 40 | . . . . . | 40 | 41 | 0 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 3 | do. . | do. . . | 5 . . . | 30 | . . . . . | . . . . . | . . . . . | . . . . . | 0 . . | 0 | 0 | 0 | 0 |
| 4 | do. . | do. . . | Yes, . . . . . | 30 | 40 | 40 | 40 | 40 | 0 . . | 0 | 0 | 0 | 0 |
| 5 | do. . | do. . . | 4 years, . . . | 30 | . . . . . | . . . . . | . . . . . | . . . . . | 0 . . | . . . . . | . . . . . | . . . . . | . . . . . |

## MONTGOMERY COUNTY.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, . | Bricklayer, . . | 3 years, . . . | 45 cents, | 45 cents, | 45 cents, | 45 cents, | 45 cents, | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 2 | do. . | do, . . | 5 . . . | 45 | 45 | . . . . . | . . . . . | . . . . . | 5½ months, . | 3 months, | . . . . . | . . . . . | . . . . . |

WORKMEN IN BUILDING TRADES.—LANCASTER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years. | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, | Bricklayer, | Weekly, | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 2 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |
| 3 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | |
| 4 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | |
| 5 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | |

MONTGOMERY COUNTY—*Continued.*

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Bricklayer, | ..... | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 2 | do. | do. | Weekly, | $20 00 | $255 00 | ..... | ..... | ..... | do. | No. |

WORKMEN IN BUILDING TRADES.—LANCASTER COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If their is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Bricklayer, | Piece, . . | . . . . . | Yes, | No, . . . . . | No, . . . . . | . . . . . | 10 | Yes, | No. |
| 2 | do. . . . | do. | do. | 25 cts. per day more, | Yes, | No, . . . . . | . . . . . | . . . . . | 10 | No, | |
| 3 | do. . . . | do. | do. | 25 cts. per day more, | Yes, | No, . . . . . | No, . . . . . | . . . . . | 9 & 10 | No, | |
| 4 | do. . . . | do. | do. | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 10 | No, | |
| 5 | do. . . . | do. | do. | 30 cts. per day more, | Yes, | No, . . . . . | No, . . . . . | . . . . . | 9 & 10 | No, | |

WORKMEN IN BUILDING TRADES—MONTGOMERY COUNTY—*Continued.*

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Bricklayer, | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 8 & 9 | No, | |
| 2 | do. | do. | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 9 | Yes, | No. |

## WORKMEN IN BUILDING TRADES.—LACKAWANNA COUNTY.

| Office number. | Nationality. where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Bricklayer, | 7 years, | 35 cts., | 35 cts. | 35 cts., | 40 cts., | 38 cts., | 1½ months, | 12 months | 8 months, | 0 months. | 0 months, |
| 2 | Ireland, | do. | 3 | 35 | 35 | 35 | 30 | 30 | ..... | ..... | ..... | ..... | ..... |
| 3 | England, | do. | 5 | 35 | 35 | 33 | 33 | 33 | 3 | 4 | 4 | 4 | 4 |
| 4 | United States, | do. | 3 | 35 | 35 | 35 | 30 | 30 | 6 | ..... | ..... | ..... | ..... |
| 5 | do. | do. | 3 | 35 | 35 | ..... | ..... | ..... | 2 | 2 | 2 | 2 | 3 |
| 6 | do. | do. | 3 | 39 | 44 | 44 | 39 | 39 | 3 | 4 | 4 | 4 | 4 |
| 7 | do. | do. | 3 | 35 | 27 | ..... | ..... | ..... | 2 | 3 | ..... | ..... | ..... |
| 8 | Ireland, | do. | 4 | 35 | ..... | ..... | 30 | 30 | 6 | 3 | 3 | 3 | 3 |

WORKMEN IN BUILDING TRADES.—LACKAWANNA COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, . . . . | Bricklayer, . . . . | Semi-monthly, . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | United States, . . . . . | No. |
| 2 | Ireland, . . . . . | do. . . . . | do. . . | . . . . . | $50 00 | $75 00 | $100 00 | . . . . . | do. . . . . | |
| 3 | England, . . . . . | do. . . . . | do. . . | $800 75 | 700 00 | 600 50 | 600 00 | $600 00 | England, . . . . . | No. |
| 4 | United States, . . . . | do. . . . . | do. . . | . . . . . | 100 00 | 150 00 | 125 00 | 200 00 | United States, . . . . . | No. |
| 5 | do. . . . . | do. . . . . | do. . . | 180 00 | 450 00 | 450 00 | 450 00 | 405 00 | do. . . . . | |
| 6 | do. . . . . | do. . . . . | do. . . | 100 00 | 600 00 | 600 00 | 600 00 | 600 00 | do. . . . . | No. |
| 7 | do. . . . . | do. . . . . | do. . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 8 | Ireland, . . . . . | do. . . . . | do. . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |

WORKMEN IN BUILDING TRADES.—LACKAWANNA COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen. If so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Bricklayer, | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 2 | Ireland, . . | do. | Piece, | . . . . . | . . . | . . . . . | . . . . . | . . . . . | | | |
| 3 | England, . . . | do. | Piece, . . | $1 to $2 more per day, | Yes. | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 4 | United States, | do. | Piece, . . | 33 per cent. more, . | Yes, | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 5 | do. | do. | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 6 | do. | do. | . . . . . | . . . . . | Yes, . | No. . . . . | Yes, . . . . . | Lowered, . . . . . | 9 | No. | |
| 7 | do. | do. | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 8 | Ireland, . . . | do. | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 9 | No. | |

## WORKMEN IN BUILDING TRADES.—LACKAWANNA COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long. | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment. | During what part of the years. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, . | Painter, . . . . | 2 years, . . . | 25 cts., . . | 25 cts., . . | 25 cts., . . | 25 cts., . . | 25 cts., . . | 2 months, . . | 3 months, | 2 months, | 3 months, | 3 months. |
| 2 | do. . | do. . . . . | 4 . . . | 25 . . | 25 . . | 25 . . | 25 . . | 25 . . | 1 . . | . . . . . | . . . . . | . . . . . | . . . . . |

WORKMEN IN BUILDING TRADES.—LACKAWANNA COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly. | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, . . . . | Painter, . . . . . | Weekly, . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | United States, . . . . . | No. |
| 2 | do. . . . . | do. . . . . | Semi-monthly, . . | $235 00 | $550 00 | $600 00 | $550 00 | $550 00 | do. . . . . | No. |

WORKMEN IN BUILDING TRADES.—LACKAWANNA COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much? | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Painter, . . | Piece, . . | . . . . . | Yes, . . | . . . . . | . . . . . | . . . . . | 9 & 10 | No. | |
| 2 | do. | do. . . | . . . . . | . . . . . | Yes, . . | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |

## WORKMEN IN BUILDING TRADES.—LACKAWANNA COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | Germany, | Carpenter, | 3 years, | 25 cts., | 25 cts., | 20 cts., | 18 cts., | 18 cts., | 2 months, | 0 months, | 0 months, | 0 months, | 0 months, |
| 2 | United States, | do. | 4 | 25 | 25 | 26 | 26 | 26 | 0 | 0 | 0 | 0 | 0 |
| 3 | do. | do. | 4 | 20 | 20 | 20 | 20 | 20 | 0 | 0 | 0 | 0 | 0 |
| 4 | do. | do. | 2 | 24 | 25 | 23 | 20 | 20 | 3 | 0 | 0 | 0 | 0 |
| 5 | do. | do. | No, | 28 | 25 | 25 | 25 | 25 | 1 | 0 | 0 | 0 | 0 |
| 6 | do | do. | 3 | 25 | 25 | 25 | 25 | ..... | ..... | ..... | ..... | ..... | ..... |
| 7 | England, | do. | No, | 25 | 25 | 22 | 22 | 22 | 3 | 4 | ..... | 2 | 2 |
| 8 | United States. | do. | 1 | 21 | 21 | 21 | 21 | 21 | 0 | 1 | 0 | 0 | ..... |
| 9 | do. | do. | No, | 25 | 25 | 22 | 22 | ..... | 1 | 2 | ..... | ..... | ..... |
| 10 | England, | do. | 4 | 25 | 25 | 25 | 25 | 30 | ..... | ..... | ..... | ..... | ..... |
| 11 | United States, | do. | 10 | 20 | 20 | ..... | ..... | ..... | 1½ | ½ | 1 | ..... | ..... |
| 12 | Germany, | do. | Yes. | 19 | 19 | 19 | ..... | ..... | 0 | 0 | 0 | ..... | ..... |
| 13 | United States, | do. | 3 | 25 | 25 | 25 | 25 | 23 | 0 | 0 | 1 | 2 | 1 |
| 14 | do. | do. | 5 | 25 | 25 | 25 | 20 | 20 | 0 | 0 | ..... | 0 | 0 |
| 15 | do. | do. | ..... | 25 | 25 | 25 | 23 | 23 | ..... | ..... | ..... | ..... | ..... |
| 16 | do. | do. | 3 | 28 | 28 | ..... | ..... | ..... | 0 | ..... | ..... | ..... | ..... |

WORKMEN IN BUILDING TRADES.—LACKAWANNA COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly, or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | Germany, | Carpenter, | Monthly, | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 2 | United States, | do. | Semi-monthly, | $351 00 | $702 00 | $702 00 | $702 00 | $702 00 | do. | No. |
| 3 | do. | do. | Monthly, | 200 00 | 400 00 | ..... | ..... | ..... | do. | No. |
| 4 | do. | do. | do. | 105 00 | 480 00 | 480 00 | 480 00 | 480 00 | do. | No. |
| 5 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | No. |
| 6 | do. | do. | do. | 350 00 | ..... | ..... | ..... | ..... | United States. | No. |
| 7 | England, | do. | do. | 135 00 | 450 00 | ..... | 400 00 | 400 00 | ..... | No. |
| 8 | United States, | do. | do. | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 9 | do. | do. | ..... | 223 00 | ..... | ..... | ..... | ..... | ..... | No. |
| 10 | England. | do. | Monthly, | ..... | ..... | ..... | ..... | ..... | England, | Sometimes. |
| 11 | United States, | do. | do. | ..... | ..... | ..... | ..... | ..... | United States, | No. |
| 12 | Germany, | do. | do. | 216 00 | 450 00 | 450 00 | ..... | ..... | Germany, | No. |
| 13 | United States, | do. | do. | 300 00 | 600 00 | 550 00 | 550 00 | 550 00 | United States, | No. |
| 14 | do. | do. | do. | 270 00 | 540 00 | ..... | 540 00 | 540 00 | do. | No. |
| 15 | do. | do. | do. | 251 62 | 331 87 | 221 54 | 268 23 | 256 29 | ..... | No. |
| 16 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | United States, | No. |

WORKMEN IN BUILDING TRADES.—LACKAWANNA COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Germany. . . | Carpenter, | . . . . . | . . . . . | Yes. . | No, . . . . . | . . . . . | . . . . . | 9 | Yes, . | Yes. |
| 2 | United States, | do. | . . . . . | . . . . . | Yes, . | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 3 | do. | do. | . . . . . | . . . . . | No, . | Yes, . . . . . | Yes, . . . . . | Lowered, . . . . . | 10 | No. | |
| 4 | do. | do. | Day, . . | . . . . . | Yes. . | . . . . . | Yes. . . . . | Lowered. . . . . | 9 | No. | |
| 5 | do. | do. | . . . . . | . . . . . | No. . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | No. |
| 6 | do. | do. | . . . . . | . . . . . | Yes, . | No, . . . . . | No, . . . . . | . . . . . | 9 | No. | |
| 7 | England, . . . | do. | . . . . . | . . . . . | Yes. . | Yes; 10 per cent., . . . . | Yes, . . . . . | Lowered 10 per cent., | 9 | No. | |
| 8 | United States, | do. | . . . . . | . . . . . | Yes, . | Yes; 10 per cent., . . . . | Yes, . . . . . | Lowered 10 per cent., | 9 | No. | |
| 9 | do. | do. | . . . . . | . . . . . | No, . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 10 | England, . . . | do. | Piece, . . | . . . . . | No, . | . . . . . | Yes, . . . . . | Lowered, . . . . . | 9 | Yes. . | No. |
| 11 | United States. | do. | Day, . . | . . . . . | Yes, . | No, . . . . . | No, . . . . . | . . . . . | 10 | No. | |
| 12 | Germany, . . | do. | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 13 | United States, | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 14 | do. | do. | Piece, . . | Very little, . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | | |
| 15 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 16 | do. | do. | . . . . . | . . . . . | No, . | . . . . . | . . . . . | . . . . . | 9 | No. | |

## WORKMEN IN BUILDING TRADES.—LACKAWANNA COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Plumber, | 5 years, | 28 cts. | 28 cts. | 28 cts. | 28 cts. | cts. | 2 months, | 0 months, | months. | 0months. | 0months, |
| 2 | do, | do. | 5 | 25 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 3 | do. | do. | 5 | 23 | ..... | ..... | ..... | ..... | 0 | ..... | ..... | ..... | ..... |
| 4 | do. | do. | 5 | 28 | ..... | ..... | ..... | ..... | 0 | ..... | ..... | ..... | ..... |
| 5 | do. | do. | 6 | 28 | ..... | ..... | ..... | ..... | 0 | 0 | 0 | 0 | 0 |
| 6 | do. | do. | 5 | 31 | 31 | 28 | 28 | 28 | ..... | 0 | 0 | 0 | ..... |
| 7 | do. | do, | 5 | 28 | 28 | ..... | ..... | ..... | 0 | 0 | 0 | 0 | 0 |
| 8 | do. | do. | 5 | 28 | 31 | 28 | 28 | 28 | 0 | 0 | ..... | ..... | ..... |
| | do. | do. | 5 | 30 | 30 | 25 | 20 | ..... | ..... | ..... | ½ | ..... | ..... |
| 10 | do.. | do. | 5 | 28 | 22 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 11 | Germany, | Tinner, | 3½ | 21 | 19 | 15 | ..... | ..... | 0 | 0 | 1 | 0 | 0 |
| 2 | United States, | do, | 4 | 22 | 22 | 22 | 22 | 22 | 0 | 0 | 0 | 0 | 0 |
| 13 | do. | do. | 9 | 27 | 27 | 25 | 25 | 25 | ..... | ..... | ..... | ..... | ..... |
| 1 | do. | do, | 5 | 28 | 28 | 28 | 28 | 28 | ..... | ..... | ..... | ..... | ..... |
| 15 | do. | do. | 4 | 25 | 20 | 20 | 17 | 17 | 2 | 0 | 0 | ..... | ..... |
| 16 | do. | do. | 3 | 28 | 28 | 28 | 28 | 28 | ..... | ..... | ..... | ..... | ..... |

WORKMEN IN BUILDING TRADES—LACKAWANNA COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, | Plumber, | Weekly, | $290 00 | $390 00 | $390 00 | $390 00 | ..... | United States, | No. |
| 2 | do. | do. | Monthly, | 175 00 | ..... | ..... | ..... | ..... | do. | No. |
| 3 | do. | do. | Weekly, | 300 00 | ..... | ..... | ..... | ..... | do. | No. |
| 4 | do, | do. | do. | 300 00 | ..... | ..... | ..... | ..... | do. | No. |
| 5 | do, | do. | do. | 375 00 | 400 00 | 350 00 | 300 00 | $250 00 | do. | No. |
| 6 | do. | do, | do. | 429 00 | ..... | ..... | ..... | ..... | do. | No. |
| 7 | do. | do. | Monthly, | 372 00 | ..... | ..... | ..... | ..... | do. | No. |
| 8 | do. | do. | Weekly, | 390 00 | ..... | ..... | ..... | ..... | do. | No. |
| 9 | do. | do, | do. | 400 00 | ..... | ..... | ..... | ..... | do. | No. |
| 10 | do. | do. | Semi-monthly, | 200 00 | ..... | ..... | ..... | ..... | do. | No. |
| 11 | Germany, | Tinner, | Weekly, | 260 00 | 520 00 | 400 00 | ..... | ..... | do. | No. |
| 12 | United States, | do. | Monthly, | 300 00 | 600 00 | 600 00 | 600 00 | 600 00 | do. | No. |
| 13 | do. | do. | Weekly, | 370 00 | ..... | ..... | ..... | ..... | do. | No. |
| 14 | do. | do. | do. | 375 00 | 700 00 | 700 00 | 700 00 | 700 00 | do. | No. |
| 15 | do. | do. | do. | 253 00 | 624 00 | 624 00 | ..... | ..... | do. | No, |
| 16 | do. | do. | do. | ..... | ..... | ..... | ..... | ..... | do. | No. |

WORKMEN IN BUILDING TRADES.—LACKAWANNA COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Plumber, | Day, | | Yes. | No. | No, | | 9 | Yes, | No. |
| 2 | do. | do. | Day, | | Yes, | No, | No. | | 9 | No. | |
| 3 | do, | do, | | | Yes, | No. | | | 9 | Yes. | No. |
| 4 | do. | do, | | | | No. | | | 9 | No. | |
| 5 | do. | do. | Day, | | Yes, | No. | No. | | 9 | No. | |
| 6 | do. | do. | Day, | | Yes, | No. | No, | | 9 | No. | |
| 7 | do. | do. | Day, | | Yes, | No. | No. | | 9 | No. | |
| 8 | do. | do, | Day, | | Yes, | No, | | | 9 | No. | |
| 9 | do. | do. | | | Yes, | No. | No. | | 9 | No. | |
| 10 | do. | do. | Day, | | Yes, | | | | | | |
| 11 | Germany, | Tinner, | | | Yes, | No. | No, | | 9 | No. | |
| 12 | United States, | do. | Day, | 25 c. per day, | Yes, | No. | Yes, | 50 c. per day lower, | 9 | No. | |
| 13 | do. | o. | Day, | 50 c. per day, | Yes, | No. | No, | | 9 | No. | |
| 14 | do. | do. | Day, | | Yes, | No. | No. | | 9 | No. | |
| 15 | do. | do, | | | Yes, | No. | No. | | 9 | No. | |
| 16 | do. | do. | Day, | | Yes, | No. | No. | | 9 | Yes, | No. |

## WORKMEN IN BUILDING TRADES.—LYCOMING COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States. | Carpenter, | No, | 20 cts. | 22 cts. | 27 cts. | 26 cts. | 22 cts. | 0 months. | 1 months. | 0 months. | 0 months. | months, |
| 2 | do. | do. | Yes. | 17½ | 17½ | 20 | 20 | 21 | 5 | 4 | 4 | 4 | 0 |
| 3 | do. | do. | 3 years, | 20 | 20 | 20 | 20 | 20 | 3 | 3 | 8 | 3 | 3 |
| 4 | do. | do. | 3 | 20 | 20 | 20 | 20 | 20 | 0 | 0 | 0 | 0 | 0 |
| 5 | do. | do. | 3½ | 25 | 25 | 25 | 25 | 25 | 0 | 0 | 0 | 0 | 0 |
| 6 | do. | do. | 3 | 20 | 28 | 23 | 23 | 25 | 3 | 4 | 4 | 4 | 4 |
| 7 | do. | do. | 3 | 15 | 19 | 20 | 20 | 21 | 4 | ..... | ..... | ..... | 0 |
| 8 | do. | do. | 3 | 17 | 20 | 20 | 20 | 20 | 6 | 6 | 6 | 2 | 2 |
| 9 | do. | do. | 3 | 19 | 18 | 18 | 18 | 18 | 1 | 4 | 0 | ..... | ..... |
| 10 | de. | do. | 2 | 20 | 20 | 27½ | 25 | 18 | ½ | 3 | 2 | 3 | 3 |
| 11 | do. | do. | No, | 20 | 20 | * | * | * | 0 | 12 | * | * | * |
| 12 | do. | do. | 2½ years | 20 | 40 | 35 | 27 | 18 | 3 | 3 | 0 | 0 | 0 |
| 13 | do. | do. | 3 | * | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 14 | do. | do. | 3½ | 20 | 20 | 20 | 23 | 23 | 2 | 1 | 1 | 2 | 1 |
| 15 | do. | do. | 3 | 20 | 20 | 22½ | 22½ | 25 | 3 | 4 | 4 | 4 | ..... |
| 16 | do. | do. | 2 | 25 | 25 | 25 | 25 | 25 | 0 | 0 | 0 | 2 | 0 |
| 17 | do. | do. | 3 | 20 | 20 | 20 | 20 | 20 | 2 | 3 | 0 | 0 | 6 |
| 18 | do. | do. | 4 | 21 | 22 | 20 | 20 | 20 | 1½ | 1 | 1 | 1 | 1 |

* At other business.

WORKMEN IN BUILDING TRADES—LYCOMING COUNTY.—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, | Carpenter, | Weekly, | | | | | | | No. |
| 2 | do, | do. | do. | $25 00 | $262 50 | $243 10 | $217 25 | $391 12 | United States, | Yes. |
| 3 | do. | do. | do. | 100 00 | 207 00 | 95 00 | 207 00 | 207 00 | do. | No. |
| 4 | do. | do. | do. | | | | | | do. | No. |
| 5 | do. | do. | do. | | | | | | do. | No. |
| 6 | do. | do. | do. | 240 00 | 396 00 | 324 00 | 324 00 | 360 00 | do. | No. |
| 7 | do. | do. | | 81 00 | 676 00 | | | | do. | No. |
| 8 | do. | do. | | | | | | | do. | Yes. |
| 9 | do. | do. | Monthly, | 200 00 | | | | | do. | No. |
| 10 | do. | do. | Weekly, | 235 30 | 382 90 | | | | do. | |
| 11 | do. | do. | | 144 00 | | | | | | No. |
| 12 | do. | do. | Weekly, | 110 00 | 350 00 | 300 00 | 200 00 | 200 00 | United States, | No. |
| 13 | do. | do. | Contract, | | | | | | do. | |
| 14 | do. | do. | Weekly, | 180 00 | 440 00 | 450 00 | 400 00 | 500 00 | do. | No. |
| 15 | do. | do. | do. | 155 00 | | | | | do. | No. |
| 16 | do. | do. | do. | | 900 00 | 725 00 | 750 00 | 681 15 | do. | Yes. |
| 17 | do. | do. | | 87 75 | 325 00 | 500 00 | 325 00 | 275 00 | do. | No. |
| 18 | do | do. | Weekly, | 288 93 | 688 98 | 572 85 | 618 00 | 550 25 | do. | |

WORKMEN IN BUILDING TRADES.—LYCOMING COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day. | If there is a difference, state how much. | Are apprentices employed in your trade. | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent. | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Carpenter, | . . . . . | . . . . . | No, . | Yes, . . . . . | Yes, . . . . . | Lowered, . . . . . | 10 | No. | |
| 2 | do. | do. | Day, . . | 11 per cent. more, . | Yes, . | Yes. . . . . | Yes, . . . . . | Lowered, . . . . . | 10 | No. | |
| 3 | do. | do. | . . . . . | . . . . . | Yes, . | No machinery, . . . . . | . . . . . | . . . . . | 9 & 10 | Yes. . | No. |
| 4 | do. | do. | . . . . . | . . . . . | No, . | No, . . . . . | No, . . . . . | . . . . . | 10 | No. | |
| 5 | do. | do. | . . . . . | . . . . . | Yes. | . . . . . | Yes, . . . . . | . . . . . | 10 | Yes, . | No. |
| 6 | do. | do. | Piece, . . | 10 per cent. more . | Yes, . | Yes, 66 per cent., . . . . . | Yes, . . . . . | Lowered 33 per cent. . | 10 | Yes, . | No. |
| 7 | do. | do. | . . . . . | . . . . . | Yes. . | Yes, . . . . . | Yes, . . . . . | Lowered 50 per cent. . | 10 | No. | |
| 8 | do. | do. | . . . . . | . . . . . | No, . | Yes, 50 per cent. . . . . | Yes. . . . . | Lowered 25 per cent. . | 10 | Yes, . | No. |
| 9 | do. | do. | Day, . . | 25 per cent. more, . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 10 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 11 | do, | do. | Day, . . | . . . . . | No, . | . . . . . | . . . . . | . . . . . | 10 | Yes. . | Yes. |
| 12 | do. | do. | . . . . . | . . . . . | Yes, . | Yes. . . . . | Yes, . . . . . | Lowered, . . . . . | 10 | No. | |
| 13 | do. | do. | . . . . . | . . . . . | Yes. . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | Yes. |
| 14 | do. | do. | . . . . . | No difference. . . . | o. . | Yes, 10 per cent., . . . . | Yes, . . . . . | Lowered 12 per cent. . | 10 | No. | |
| 15 | do, | do. | . . . . . | . . . . . | Yes, | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 16 | do. | do. | Piece, . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 17 | do. | do. | . . . . . | . . . . . | No, . | Yes, . . . . . | Yes, . . . . . | Lowered. . . . . | 10 | No. | |
| 18 | do. | do. | . . . . . | . . . . . | Yes, . | Yes, . . . . . | Yes, . . . . . | Lowered 20 per cent . | 10 | Yes, . | No. |

## WORKMEN IN BUILDING TRADES.—LYCOMING COUNTY.

| Office number. | Nationality, where born, | Trade or occupation. | Did you serve an apprenticeship. If so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Bricklayer, | 2 years, | 32 cts., | 32 cts., | 35 cts., | 35 cts., | 35 cts., | 5½ months, | 10 months, | 10½ months | 7 months, | 6 months, |
| 2 | do. | do. | 3 | 30 | 33 | 32 | 35 | ..... | 4 | 2 | 5 | 12 | 5 |
| 3 | do. | do. | 4 | 32 | 35 | 38 | 40 | 45 | 5 | 5 | 5 | 5 | 5 |
| 4 | do. | do. | 3 | 30 | 32 | 32 | 35 | 39 | 4 | 6 | 5 | 12 | 5 |
| 5 | do. | do. | 3 | 30 | 30 | 32 | ..... | 35 | ..... | ..... | ..... | ..... | ..... |
| 6 | do. | do. | 3 | 35 | 35 | 35 | 35 | 35 | ..... | ..... | ..... | ..... | ..... |
| 7 | do. | do. | 3 | 36 | 35 | 40 | ..... | ..... | 2 | ..... | 1 | ..... | ..... |
| 8 | do. | do. | 1 | 37 | 35 | 33 | ..... | ..... | 4 | 3 | 4 | ..... | ..... |
| 9 | do. | do. | 3 | 40 | 40 | 40 | 43 | 43 | 3 | ..... | ..... | ..... | ..... |
| 10 | do. | do. | 2 | 30 | 32 | 32 | 35 | 35 | ..... | 2 | 1 | 1 | 1 |
| 11 | do. | do. | 5 | 35 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... |
| 12 | do. | do. | 3 | 32 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 13 | do. | do. | 4 | 20 | 20 | 20 | 15 | 15 | ..... | ..... | ..... | ..... | ..... |
| 14 | do. | do. | 3 | 30 | 35 | 35 | 35 | 35 | ..... | ..... | ..... | ..... | ..... |
| 15 | do. | Hod carrier, | No, | 17 | 20 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

WORKMEN IN BUILDING TRADES.—LYCOMING COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years. | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States. | Bricklayer, | Weekly, | $60 00 | $211 25 | $167 50 | $437 50 | $525 00 | United States, | |
| 2 | do. | do. | do. | 400 00 | 850 00 | 400 00 | | 400 00 | do. | |
| 3 | do. | do. | do. | 55 18 | | | | | do. | |
| 4 | do. | do. | do. | 350 00 | 400 00 | 350 00 | | 490 00 | do. | |
| 5 | do. | do. | do. | 300 00 | 600 00 | 600 00 | | 400 00 | do. | |
| 6 | do. | do. | do. | | | | | | do. | No. |
| 7 | do. | do. | do. | 175 00 | | | | | do. | No. |
| 8 | do. | do. | do. | | 400 00 | | | | do. | No. |
| 9 | do. | do, | do. | | | | | | do. | |
| 10 | do. | do. | do. | | | | | | do. | No. |
| 11 | do. | do. | do. | | | | | | do. | Yes. |
| 12 | do. | do. | do. | 200 00 | | | | | do. | No. |
| 13 | do. | do. | do. | | | | | | do. | No. |
| 14 | do. | do. | do. | | | | | | do, | No. |
| 15 | do. | Hod carrier, | do. | | | | | | | |

WORKMEN IN BUILDING TRADES.—LYCOMING COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much, | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaeed any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how mueh? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Bricklayer, | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 2 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 4 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 5 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 6 | do. | do. | Day, . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | No. | |
| 7 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | No. | |
| 8 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 8 to 10 | No. | |
| 9 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 10 | do. | do. | Piece, . . | 75 cts. per day more, | Yes, . | . . . . . | Yes, . . . . . | Lowered 40 per cent., | 10 | Yes, . | Yes. |
| 11 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 12 | do. | do. | Hour, . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | . . . . | |
| 13 | do. | do. | Hour, . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | . . . . | . . . . | |
| 14 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 15 | do. | Hod carrier, | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 10 | No. | |

## WORKMEN IN BUILDING TRADES.—LYCOMING COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Plasterer, | 4 years, | 25 cts., | 36 cts., | 33 cts., | 39 cts., | 39 cts., | 0 months, | 4 months, | 4 months, | 4 months, | 4 months. |
| 2 | do. | do. | 3 | 17 | 17 | 18 | 18 | 25 | 3 | 3 | 3 | 6 | 1 |
| 3 | do. | do. | 3 | 25 | 25 | 25 | 25 | 25 | 2 | 4 | 4 | 4 | 4 |
| 4 | do. | do. | 3 | 20 | 22 | 25 | 28 | 28 | 0 | 0 | 0 | 0 | 0 |
| 5 | do. | do. | 3 | 22 | 27 | 27 | 30 | ..... | ..... | 3 | 3 | 3 | ..... |
| 6 | do, | do. | 2 | 18 | 18 | 18 | 18 | 18 | ..... | ..... | ..... | ..... | ..... |
| 7 | do. | do, | 5 | 25 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 8 | do. | do. | 4 | 25 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 9 | do. | Painter, | 5 | 15 | 20 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 10 | do. | do. | 1 | 17 | 15 | ..... | ..... | ..... | 2 | 4 | ..... | ..... | ..... |
| 11 | England, | do. | 3 | 25 | 23 | 23 | 23 | 23 | ..... | ..... | ..... | ..... | ..... |

WORKMEN IN BUILDING TRADES.—LYCOMING COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly. | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, | Plasterer, | Weekly, | $216 00 | $432 00 | $432 00 | $544 00 | $544 00 | United States. | |
| 2 | do. | do. | do. | 225 00 | 400 00 | 300 00 | 300 00 | 625 00 | do. | No. |
| 3 | do. | do. | do. | 324 00 | 648 00 | 648 00 | 648 00 | 648 00 | do. | No. |
| 4 | do. | do. | do. | | | | | | do. | |
| 5 | do. | do. | do. | | | | | | do. | No. |
| 6 | do. | do. | do. | | | | | | do. | |
| 7 | do. | do. | Contract, | | | | | | do. | |
| 8 | do. | do. | Weekly, | | | | | | | |
| 9 | do. | Painter, | do. | | | | | | do. | Sometimes. |
| 10 | do. | do. | | 160 00 | | | | | do. | No. |
| 11 | England, | do. | Monthly, | | | | | | do. | No. |

WORKMEN IN BUILDING TRADES.—LYCOMING COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Plasterer, | | | Yes, | No. | | | 9 | No. | |
| 2 | do. | do. | Piece, | 50 per cent more, | Yes, | No, | No, | | 9 | No. | |
| 3 | do. | do. | | | Yes, | | | | 9 | No. | |
| 4 | do. | do. | | | Yes, | | | | 9 | Yes, | No. |
| 5 | do. | do. | | | Yes, | No, | No. | | 10 | No. | |
| 6 | do. | do. | | | | | | | | | |
| 7 | do. | do. | Piece, | | | | | | | | |
| 8 | do. | do. | Piece, | | | | | | | | |
| 9 | do. | Painter, | | | | | Yes, | Lowered 25 per cent, | 10 | No. | |
| 10 | do. | do. | | | Yes, | | | | 10 | No. | |
| 11 | England, | do. | | | Yes, | No, | No, | | 9 | No. | |

## WORKMEN IN BUILDING TRADES.—BLAIR COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Hod carrier, | No. | 12 cents, | 20 cents, | 20 cents, | ..... | ..... | 1 month, | 3 months, | ..... | ..... | ..... |
| 2 | do. | do. | No, | 15 | 17 | ..... | ..... | ..... | 6 | 3 | ..... | ..... | ..... |
| 3 | do. | do. | No, | 15 | 17 | ..... | ..... | ..... | 4 | 4 | ..... | ..... | ..... |
| 4 | do. | do. | No, | 12 | 15 | 15 | 15 cents, | 17 cents, | ..... | ..... | ..... | ..... | ..... |
| 5 | do. | do. | No, | 14 | 15 | ..... | ..... | ..... | 5¾ | 4 | ..... | months | months. |
| 6 | do. | do. | No, | 15 | 17 | 16 | 17 | 17 | 4 | 5 | ..... | ..... | ..... |
| 7 | do. | do. | No, | 15 | 20 | ..... | ..... | 15 | 6 | 2 | 2 months, | ..... | ..... |
| 8 | do. | do. | No, | 15 | 17 | ..... | ..... | ..... | 6 | 6 | ..... | ..... | ..... |

WORKMEN IN BUILDING TRADES.—BLAIR COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, | Hod carrier, | Weekly, | $50 00 | $180 00 | $150 00 | ..... | ..... | ..... | No. |
| 2 | do. | do. | do. | 0 00 | 240 00 | ..... | ..... | ..... | ..... | No. |
| 3 | do. | do. | Semi-monthly, | 65 00 | 280 00 | 275 00 | $280 00 | $260 00 | ..... | No. |
| 4 | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | No. |
| 5 | do. | do. | Semi-monthly, | 8 50 | 225 00 | 280 00 | 260 00 | ..... | ..... | No. |
| 6 | do. | do. | Weekly, | 40 00 | 175 00 | 260 00 | ..... | ..... | ..... | No. |
| 7 | do. | do. | do. | ..... | 320 00 | ..... | ..... | 175 00 | ..... | No. |
| 8 | do. | do. | do. | ..... | 250 00 | ..... | ..... | ..... | ..... | No. |

WORKMEN IN BUILDING TRADES.—BLAIR COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much. | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them, and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | United States, | Hod carrier, | ..... | ..... | No. | ..... | ..... | ..... | 10 | No. | |
| | do. | do. | ..... | ..... | No. | ..... | ..... | ..... | 10 | No. | |
| | do. | do. | ..... | ..... | No. | ..... | ..... | ..... | 10 | No. | |
| | do. | do. | ..... | ..... | No. | ..... | ..... | ..... | 10 | No, | |
| | do. | do. | ..... | ..... | No. | ..... | ..... | ..... | 10 | Yes, | Yes. |
| | do. | do. | ..... | ..... | No. | ..... | ..... | ..... | 10 | No. | |
| | do. | do. | ..... | ..... | No. | ..... | ..... | ..... | 10 | No. | |
| | do. | do. | ..... | ..... | ..... | ..... | ..... | ..... | 10 | No. | |

## WORKMEN IN BUILDING TRADES.—LAWRENCE COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 1 | United States, | Carpenter, | 3 years, | 25 cts., | 28 cts., | months, | months, | months, | months, | months, | months, | months, | months, |
| 2 | do. | do. | 3 | 25 | 25 | 22 | 18 | 16 | 2 | 4 | 5 | 4 | 2 |
| 3 | do. | do. | 3 | 22 | 22 | ..... | ..... | ..... | 4½ | 0 | 1 | ..... | ..... |
| 4 | do. | do, | 2 | 28 | 28 | 28 | 28 | 28 | 2 | ..... | ..... | ..... | ..... |
| 5 | do. | do. | 3 | 25 | 28 | 28 | 25 | 25 | 6 | 0 | 0 | 0 | 0 |
| 6 | do. | do. | 3 | 22 | 28 | 25 | 25 | 25 | 2 | 6 | 6 | 6 | ..... |
| 7 | do. | do. | 3 | 28 | 25 | 18 | ..... | ..... | 6 | 4 | 6 | ..... | ..... |
| 8 | do. | do. | 3 | 16 | 22 | 28 | 25 | 22 | ..... | ..... | ..... | ..... | ..... |
| 9 | do. | do. | 3 | 28 | 28 | 28 | 28 | 25 | 1 | 3 | ..... | 3 | 2 |
| 10 | do. | do. | 3 | 25 | 25 | 20 | 20 | 22 | 2 | 0 | 0 | ..... | 0 |
| 11 | do. | do. | ..... | 20 | 20 | 23 | ..... | ..... | 2 | 2 | 0 | ..... | ..... |
| 12 | do. | do. | 3 | 19 | 20 | 25 | 28 | 28 | 4 | 2 | 3 | 1 | ..... |
| 13 | do. | do. | 3 | 25 | 25 | 25 | 22 | 20 | ..... | ..... | ..... | ..... | ..... |
| 14 | do. | do. | 3 | 25 | 25 | 25 | 20 | 20 | 3 | 1 | 0 | 3 | 0 |
| 15 | do. | do. | 3 | 28 | 28 | 28 | 28 | 28 | 3 | 3 | 3 | 3 | 3 |
| 16 | do. | do. | 3 | 19 | 19 | 19 | 19 | 22 | 2 | 4 | 4 | 4 | 4 |
| 17 | do. | do. | 3 | 22 | 25 | 22 | 28 | ..... | ..... | 6 | 8 | 6 | 6 |
| 18 | do. | do. | 3 | 30 | 27 | 27 | 25 | 25 | 2 | 1 | 3 | 3 | 1 |

## WORKMEN IN BUILDING TRADES.—LAWRENCE COUNTY.

| Office number. | Nationality, where born. | Trade or occupation. | Did you serve an apprenticeship, if so, for how long? | What wages did you receive per hour or day in * | | | | | During what part of the six months ending June 30, 1894, were you out of employment? | During what part of the years | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 1894 | 1893 | 1892 | 1891 | 1890 | | 1893 | 1892 | 1891 | 1890 |
| 19 | United States, . | Carpenter, . . | 3 years, . . . | 22 cts. . . . | 28 cts., . . | 28 cts., . . | 25 cts., . . | 22 cts., . . | months, . . . | month | months, . | months, . | months, . |
| 20 | do. . | do. . . | 2 . . . | 25 . . | 28 . . | 28 . . | 28 . . | 28 . . | 2 . . | 2 | 2 | 2 | 2 |
| 21 | do. . | do. . . | 3 . . . | 28 . . | 28 . . | 28 . . | 25 . . | 25 . . | . . . . . | . . . . . | . . . . . | . . . . . | 5 |
| 22 | do. . | do, . . | 3 . . . | 22 . . | 24 . . | 22 . . | 22 . . | 22 . . | 3 . . | 4 | 4 | 3 | 3 |
| 23 | do. . | do. . . | 2 . . . | 22 . . | 28 . . | 31 . . | 28 . . | 28 . . | 2 . . | 3 | 3 | . . . . . | 0 |
| 24 | do. . | do. . . | 3 . . . | 25 . . | 25 . . | 25 . . | 25 . . | 25 . . | 6 . . | 3 | . . . . . | . . . . . | . . . . . |
| 25 | do. . | do. . . | 3 . . . | 22 . . | . . . . . | . . . . . | . . . . . | . . . . . | 3 . . | . . . . . | . . . . . | . . . . . | . . . . . |
| 26 | do. . | do. . . | No, . . . . . | 25 . . | 25 . . | 28 . . | 28 . . | 28 . . | 5 . . | 1 | 1½ | 1 | 2 |
| 27 | do. . | do. . . | 2 . . . | 25 . . | 28 . . | 28 . . | 28 . . | 28 . . | 3 . . | 4 | 4 | 4 | 4 |
| 28 | do. . | do. . . | 3 . . . | 28 . . | 28 . . | 28 . . | 28 . . | 28 . . | 3 . . | 2 | 1 | 2 | 2 |

* It will be observed they have invariably been given by the hour.

WORKMEN IN BUILDING TRADES.—LAWRENCE COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 1 | United States, | Carpenter, | Weekly, | | | | | | United States, | No. |
| 2 | do. | do. | Semi-monthly, | $200 00 | $400 00 | $325 00 | $350 00 | $350 00 | do | No. |
| 3 | do. | do. | do. | 50 00 | 500 00 | | | | do. | No. |
| 4 | do. | do. | do. | 240 00 | 540 00 | | | | do. | No. |
| 5 | do. | do. | do. | | 780 00 | 780 00 | 675 00 | 675 00 | do. | No. |
| 6 | do. | do. | | | | | | | do. | No. |
| 7 | do. | do. | Weekly, | | 108 00 | | | | do. | Sometimes. |
| 8 | do. | do. | do. | | | | | | do. | |
| 9 | do. | do. | | | | | | | do. | |
| 10 | do. | do. | Weekly, | 175 00 | 600 00 | 600 00 | 550 00 | 625 00 | do. | No. |
| 11 | do. | do. | Monthly, | | | | | | | No. |
| 12 | do. | do. | Weekly, | 50 60 | | | | | United States, | No. |
| 13 | do. | do. | do. | 270 00 | | | | | do. | No. |
| 14 | do. | do. | do. | 213 13 | | | | | do. | No. |
| 15 | do. | do. | do. | 180 00 | 540 00 | 540 00 | 540 00 | 540 00 | do. | No. |
| 16 | do. | do. | | | | | | | do. | No. |
| 17 | do. | do. | | 125 00 | 100 00 | | | | do. | Sometimes. |
| 18 | do. | do. | Weekly, | 200 00 | 480 00 | 300 00 | 350 00 | | do. | No. |

WORKMEN IN BUILDING TRADES.—LAWRENCE COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | Are you paid weekly, monthly or semi-monthly? | What was your total compensation from your employment for the six months ending June 30, 1894? | What for the years | | | | Did you serve your apprenticeship in the United States, if not, where? | Do you work by the piece? |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1893 | 1892 | 1891 | 1890 | | |
| 19 | United States, . . . . . | Carpenter, . . . . | Semi-monthly, . . | $150 00 | . . . . . | . . . . . | . . . . . | . . . . . | United States, . . . . . | No. |
| 20 | do. . . . . | do. . . . . | Weekly. . . . . | 250 00 | $550 00 | $550 00 | $550 00 | $550 00 | do. . . . . | No. |
| 21 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 22 | do. . . . . | do. . . . . | do. . . . . | 110 00 | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 23 | do. . . . . | do. . . . . | do. . . . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 24 | do. . . . . | do. . . . . | do. . . . . | . . . . . | 200 00 | 250 00 | . . . . . | . . . . . | do. . . . . | No. |
| 25 | do. . . . . | do. . . . . | Semi-monthly, . . | 100 00 | . . . . . | . . . . . | . . . . . | . . . . . | do. . . . . | No. |
| 26 | do. . . . . | do. . . . . | do. . . | 55 25 | 200 00 | 175 00 | 225 00 | 200 00 | . . . . . | No. |
| 27 | do. . . . . | do. . . . . | do. . . | . . . . . | . . . . . | . . . . . | . . . . . | . . . . . | United States, . . . . . | No. |
| 28 | do. . . . . | do. . . . . | do. . . | 175 00 | 600 00 | 660 00 | 600 00 | 600 00 | do. . . . . | No. |

WORKMEN IN BUILDING TRADES.—LAWRENCE COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day? | If there is a difference, state how much? | Are apprentices employed in your trade? | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent? | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | United States, | Carpenter, | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 9 | No, | . . . . |
| 2 | do. | do. | . . . . . | . . . . . | Yes, . | No, . . . . . | No, . . . . . | . . . . . | 9 | No, | . . . . |
| 3 | do. | do. | Piece, . . | 20 per cent. more . . | No, . | Yes. . . . . | Yes, . . . . . | Lowered. . . . . | 9 & 10 | Yes, . | No |
| 4 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | No, | . . . . |
| 5 | do. | do. | Piece, . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | No, | . . . . |
| 6 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | No, | . . . . |
| 7 | do. | do. | . . . . . | . . . . . | Yes, . | Yes; 50 per cent., . . . . | Yes, . . . . . | Lowered, . . . . . | 9 | No, | . . . . |
| 8 | do. | do. | . . . . . | . . . . . | Yes. . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | No. |
| 9 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | No. |
| 10 | do. | do. | . . . . . | . . . . . | Yes. . | Yes; 70 per cent., . . . . | . . . . . | . . . . . | 9 | Yes, . | No. |
| | do. | do. | . . . . . | . . . . . | . . . . | . . . . . | . . . . . | . . . . . | 10 | Yes, . | No. |
| 12 | do. | do. | . . . . . | . . . . . | Yes, . | No, . . . . . | No, . . . . . | . . . . . | 9 | Yes, . | No. |
| 13 | do. | do. | . . . . . | . . . . . | Yes, . | No, . . . . . | No, . . . . . | . . . . . | 8 & 9 | Yes, . | No. |
| 14 | do. | do, | . . . . . | . . . . . | Yes, . | . . . . . | No, . . . . . | . . . . . | 9 | . . . . | . . . . |
| 15 | do. | do. | Day, . . | . . . . . | Yes, . | Yes; 50 per cent., . . . . | Yes, . . . . . | Lowered, 10 per cent., | 9 | No. | . . . . |
| 16 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | Yes. |
| 17 | do. | do. | Day, . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | No |
| 18 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | No. |

WORKMEN IN BUILDING TRADES—LAWRENCE COUNTY—*Continued.*

| Office number. | Nationality, where born. | Trade or occupation. | In which way can you earn most, working by the piece, hour or day. | If there is a difference, state how much. | Are apprentices employed in your trade. | Has the introduction of machinery in the shop where you are employed displaced any workmen, if so, to what extent. | Has the introduction of machinery affected the rate of wages? | Has it raised or lowered them and how much? | How many hours constitute a day's work in your trade? | Do you own the house in which you live? | Was it acquired through the assistance of a building and loan association? |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | United States, | Carpenter, | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | Yes. . | No. |
| 20 | do. | do. | Day, . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | Yes. . | No. |
| 21 | do. | do. | Day, . . | 33⅓ per cent. more, . | Yes, . | No, . . . . . | No, . . . . . | . . . . . | 8 & 9 | No, | . . . . |
| 22 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | Yes, . . . . . | Lowered, . . . . . | 9 | No, | . . . . |
| 23 | do. | do. | . . . . . | . . . . . | Yes, . | No, . . . . . | No, . . . . . | . . . . . | 9 | No, | . . . . |
| 24 | do. | do. | . . . . . | . . . . . | Yes. . | No, . . . . . | No, . . . . . | . . . . . | 9 | Yes, . | Yes. |
| 25 | do. | do. | Piece, . . | 75 cts. to $1 more p. d. | No, . | Yes; 50 per cent., . . . . | Yes, . . . . . | Lowered 50 per cent., | 8 | No, | . . . . |
| 26 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | . . . . . | . . . . . | 9 | Yes, . | No. |
| 27 | do. | do. | . . . . . | . . . . . | Yes, . | . . . . . | Yes, . . . . . | . . . . . | 9 | No, | . . . . |
| 28 | do. | do. | . . . . . | . . . . . | Yes. . | . . . . . | No, . . . . . | . . . . . | 8 & 9 | Yes, . | No. |

NOTE.—The "0" frequently used in these tables while seemingly intended by those making the returns to represent no time lost, will in most cases be found by a calculation of the earnings for the year, at the rate of wages given, to be without significance.

## BUILDING TRADES.

No. 1. I favor an apprenticeship, as it makes a better workman of a boy.

No. 2. The industrial school is well enough in its way, but I would prefer to have a boy set to work on a building at first.

No. 3. I am in favor of an apprenticeship system, as it takes practice to make perfect.

No. 4. I am in favor of an apprenticeship system.

No. 5. I favor an apprenticeship system, as it turns out a more practical workman. In answer to the question whether or not the introduction of machinery has affected the rate of wages or the number of workmen, I would reply that the introduction of machine mixed mortar has enabled the employers to do away with one-half the bricklayers' laborers, and has resulted in lowering the wages of those who are employed, at least one-third.

No. 6. I favor an apprenticeship system, because a boy to become a good workman must serve a regular apprenticeship, and be actually employed on a building.

No. 7. I have never been brought in contact with any pupils of industrial schools, so cannot answer the question intelligently as to whether the apprenticeship or training school is best.

No. 8. I favor an apprenticeship, as there are many things to be learned on a building that cannot be taught in a school.

No. 9. While a training in an industrial school might better fit a boy for some trades, I believe that practical training on a building is best for a bricklayer's apprentice.

No. 10. I favor a training school, as employers keep too many apprentices on rough work.

No. 11. I favor an apprenticeship system. Boys can learn more on a building than at school.

No. 12. I favor an apprenticeship system, as it will turn out a more practical workman.

No. 13. I favor an apprenticeship system, because boys have more practice and of course can learn more.

---

No. 14. I favor an apprenticeship system, because I learn that boys from training schools are not required to serve the time required of other apprentices.

---

No. 15. I favor an apprenticeship system, as an apprentice gets more thorough practical instruction on a building than he would in an industrial school.

---

No. 16. An industrial school nor any other school is not the proper place to learn bricklaying in all its branches.

---

No. 17. I approve of an industrial school training, as the apprentices keep too many journeymen out of employment.

---

No. 18. I favor an apprenticeship system, as it gives a boy a better and more general knowledge of the trade.

---

No. 19. I am in favor of an apprenticeship system, as boys have more practice on various kinds of work.

---

No. 20. I favor a preliminary course in an industrial school, as it gives them some idea beforehand of the work they will have to do.

---

No. 21. I prefer the apprenticeship system, because a prefer practical to theoretical training.

---

No. 22. I prefer the apprenticeship system, as a boy must become accustomed to climbing about a building to become proficient.

---

No. 23. I favor an apprenticeship, as a boy cannot be taught to be a bricklayer in a school.

---

No. 24. I prefer an apprenticeship system, as practical experience is preferable to theory.

---

No. 25. An apprentice can get a better knowledge of the trade.

---

No. 26. I favor an apprenticeship, as every boy who wishes to learn a trade should be required to serve a regular fixed term.

---

No. 27. I believe in an apprenticeship system, as they cannot get enough practice at the schools.

---

No. 28. I believe in the system that is the most practical, namely the apprenticeship system.

---

No. 29. I favor the apprenticeship system. An apprentice must serve at least three years at this trade an an employer is limited as to the number of boys he can employ, while an industrial school can turn out a great number each year who will know very little about the trade.

No. 30. I favor an industrial school training, as the education a boy receives in other branches of learning will be of great benefit to him.

---

No. 31. I favor an apprenticeship, as the boy gets the practical experience.

---

No. 32. I favor an apprenticeship system, as I do not believe in training schools as a boy cannot get as practical a training in the trade as he could if he served a regular apprenticeship with a master bricklayer. In answer to the question in regard to the introduction of machinery displacing workmen I would say that in large building operations an engine driving an endless chain in used to take the hods of bricks up to the working place. If fifty bricklayers were working on a building where the endless chain was used they would utilize about ten laborers; without the chain there would be at least twenty-five employed.

---

No. 33. I prefer the apprenticeship, as the boy by working beside different workmen has a better chance to learn his trade properly.

---

No. 34. I prefer the apprenticeship system, because the employer should have the benefit from the apprentice's labor.

---

No. 35. I do not favor an industrial school training, as the boy does not get sufficient practical experience.

---

No. 36. There are many things which a boy is obliged to learn upon a building that he cannot learn in an industrial school.

---

No. 37. They serve a year with a master bricklayer after having served three years in an industrial school, which regulation I am not in favor of. I prefer the old system of apprenticeship.

---

No. 38. I object to the question whether I favor an apprenticeship system or a school training as I have given it no attention.

---

No. 39. I prefer the apprenticeship system, as it requires the journeymen to teach them the various branches of the trade.

---

No. 40. I do not favor either of the systems, as there are too many bricklayers now to knock us out of employment.

---

No. 41. The graduates of industrial schools that I have come in contact with, have only one way of working and they do not wish to learn any other.

---

No. 42. I favor the apprenticeship system as boys receive the instruction from journeymen.

---

No. 43. An apprenticeship system is the better, as boys learn quicker and better on a building with journeymen.

No. 44. The apprentice works on a great many different kinds of work and has practice which in my way of thinking is better than theory.

---

No. 45. I favor the industrial schools, as they turn out better mechanics.

---

No. 46. The apprenticeship system turns out better mechanics.

---

No. 47. I favor the apprenticeship system, because a boy gains a more practical knowledge of the business than he can get in a school.

---

No. 48. I favor the apprenticeship system, as I consider a practical knowledge preferable to the theoretical one of a training school.

---

No. 50. I favor a regular apprenticeship system. A boy should be regularly bound and be compelled to serve his full term.

---

No. 51. On the building or structure is the proper place for boys to be trained to our trade.

---

No. 52. An apprenticeship system is better.

---

No. 53. My opinion is that a boy should serve an apprenticeship of not less than three years at hard actual work.

---

No. 54. I favor an apprenticeship system, as the apprentices come in contact with practical mechanics.

---

No. 55. I do not favor training in an industrial school, as boys do not have the advantages that they have on the building.

---

No. 56. I favor an apprenticeship system, because the apprentices get more experience about a building and come in contact with more journeymen and have experience in the various ways of working.

---

No. 57. I favor training in an industrial school, as then there will not be so much bad work on buildings.

---

No. 58. I favor an apprenticeship system, as when boys go to a school for about eighteen months they think they know it all and wish to be employed as journeymen.

---

No. 61. I favor an apprenticeship system, as the apprentice is required to do all kinds of work on a building which chance is not afforded him in an industrial school.

---

No. 62. I favor an apprenticeship system because a boy can learn his trade more thoroughly by serving a regular time with a master builder.

---

No. 63. I favor the apprenticeship system for I never saw a good workman who was taught in a school.

No. 64. I am for the apprenticeship system, as a boy working on a building gets the benefit of the ideas of those men with whom he works, whereas a boy from a school is in my opinion no better than one who has just commenced.

---

No. 65. A boy who is regularly apprenticed, can learn the business better than he could in a school.

---

No. 66. Apprentices make better mechanics.

---

No. 67. I favor the apprenticeship system, as being the most practical.

---

No. 68. An apprenticeship gives boys better opportunities to become masters of the trade, but I think that two years would be long enough to serve.

---

No. 69. The apprentice gets a chance to work at different varieties of bricklaying which would not be possible in an industrial school.

---

No. 70. I favor the apprenticeship system, as a boy has greater opportunities to learn his trade more thoroughly than he could in a school.

---

No. 71. I favor the apprenticeship system, because the boy gets a better show to learn more about the trade.

---

No. 73. I believe in the apprenticeship system. Boys from a training school cannot work on a wall, as they have no ideas of practical bricklaying.

---

No. 74. I favor an apprenticeship system, as they have a chance at the hardships as well as the easy parts of the trade.

---

No. 76. An apprentice has more practice and consequently gets a better idea how to go about his work.

---

No. 77. The apprentice gets the practical experience, hence I favor the apprenticeship system.

---

No. 78. I am for the apprenticeship system, for it requires experience in active building operations to become proficient.

---

No. 80. Boys can get more practical knowledge by serving a regular apprenticeship at different kinds of building.

---

No. 82. A boy under the apprenticeship system gets both the theoretical and practical knowledge of the business, which he cannot get at a school as I understand it.

---

No. 83. I believe in the apprenticeship system, as the boy gets a practical training. In the school it is all theory.

No. 84. A boy will have a better knowledge of the trade after having served as an apprentice, hence I favor the apprenticeship system.

---

No. 86. I am in favor of an apprenticeship system, as a boy has more chance to learn on a building than he would in a school.

---

No. 87. I think boys can learn more on a building than they can in a school.

---

No. 88. I have no preference.

---

No. 89. I favor training in an industrial school, because boys get a theoretical as well as a practical education and they get an education in other matters as well.

---

No. 90. I favor a partial training in an industrial school, because a boy gets some idea of the trade which is put in shape after he is apprenticed.

---

No. 91. I favor the apprenticeship system as apprentices have a better opportunity and more practice.

---

No. 94. I am in favor of an apprenticeship system, as I have found that boys who were regularly indentured made the best workmen.

---

No. 95. I approve of the apprenticeship system, if the apprentice serves his full time. In this business each master bricklayer has the right to have three apprentices and I think it a good plan.

---

No. 97. I approve of both systems, for the reason that in the school they are taught how to handle their trowels properly and afterwards they can be taught the rest on the building.

---

No. 98. I think both systems admirable, as they get the theoretical part of the trade in the schools; also to handle the tools properly which is of great use to them when they commence their apprenticeship on the building.

---

No. 99. I prefer the apprenticeship system, as in a school it is all theory whereas as an apprentice, a boy gets both.

---

No. 100. I prefer the apprenticeship system, as I think it best.

---

No. 101. I prefer the apprenticeship system under certain restrictions, as training and industrial schools have a tendency to overstock the labor market.

---

No. 103. More knowledge is obtained by practice than by theory, therefore, I favor the aprenticeship system.

---

No. 104. Apprenticeship system is best as I believe that every boy should serve a regular time as apprentice and should not be given employment unless he does.

No. 105. By being trained in an industrial school a boy does not have the opportunities to acquire the knowledge of his trade that an apprentice gets outside, as that is the correct plan. A boy working outside is thrown in contact with different journeymen, and learns the different ways of working.

---

No. 106. A boy who gets a training in an industrial school has a great advantage over one who has had none when he begins his apprenticeship, as he has some idea of the work.

---

No. 108. I favor both. A boy should have an industrial school training of one year, then three years as an apprentice and he will turn out to be a good workman.

---

No. 110. An apprentice makes the best mechanic.

---

No. 111. I favor plenty of apprentices as I like to give others the same chance as I had myself.

---

No. 112. I favor an apprenticeship system, as many poor families need the wages that the apprentice brings in.

---

No. 113. I prefer the industrial school training, because too much is expected from apprentices; they are obliged to do a great deal of work and no care is taken how roughly it is done. So that they are not allowed sufficient time to be taught properly.

---

No. 114. Apprenticeship, as I think the apprentice has a better chance to learn the trade by working on the building.

---

No. 115. I favor the apprenticeship system, as a boy learns more and gets a better knowledge of his trade when taught on a building.

---

No. 116. Apprenticeship system, because it takes practical experience to make a good workman.

---

No. 117. The apprenticeship system is more practical and thorough.

---

No. 118. I am in favor of both, as a school training together with practical work on buildings turns out the best workmen.

---

No. 119. I favor an apprenticeship, but not at a school, as the employer does not get the benefit of the boy's work who has learned his trade in a school and besides that, poor men cannot afford to send their sons to school as they need their wages.

---

No. 120. The apprenticeship system, as a boy learns more of the trade on a building than he can in a school.

---

No. 121. I cannot tell whether there is any difference between a boy who is taught at a school and one who learns his trade on a building.

No. 122. I favor the apprenticeship system as a boy can learn more and in less time on a building than he can by going to school.

---

No. 123. The apprentice has more practical experience.

---

No. 125. I favor the industrial school, as there a boy gets the rudiments of the trade before commencing in earnest.

---

No. 126. The apprenticeship system is better, for in my opinion it turns out better workmen.

---

No. 127. I favor the apprenticeship system, as boys who are taught in the training schools are turned out at too early an age to make good workmen.

---

No. 128. I am in favor of the apprenticeship system, because the apprentice learns the trade better.

---

No. 129. I favor a preliminary training of all apprentices in a training school, as when they commence at first on a building, they are a great detriment, to the journeyman with whom they are put to work.

---

No. 130. I favor a regular apprenticeship on a building, as they get in the way of the work better. The hours of labor in Philadelphia are from April to November, nine hours per day; from November to April, eight hours; during seven months we have a half holiday on Saturdays.

---

No. 131. I favor an apprenticeship system, as the boy gets to learn the rough part of the trade as well as the smooth.

---

No. 133. I favor the apprentice system, as practice not theory makes perfect.

---

No. 134. I favor the apprenticeship system, as a boy who is taught in a training school must afterwards go as an apprentice, therefore, I think that the time he spends in the school is lost.

---

No. 135. I am in favor of a boy being bound apprentice, as he gets his training in all the various kinds of work that a good bricklayer does.

---

No. 136. Apprenticeship always, as practice makes perfect.

---

No. 137. Apprenticeship, as the boy gets more experience.

---

No. 138. I favor the apprenticeship system, because a boy gets more practical knowledge in the various kinds of work and of the various kinds of material used.

---

No. 139. I am of the opinion that all boys who wish to learn a trade, should be regularly apprenticed; but I also think that they should be obliged to attend training school in the evenings, so that they might get the technical knowledge which is necessary to make

a good workman, such as plans, drawing, mathematics, etc., as boys are sadly neglected in these matters. I am an Englishman and served seven years at my trade in England, and have only been in the country five and one-half years and hardly like to obtrude my opinions.

---

No. 140. I think both systems are good, if practical as well as technical instruction is given.

---

No. 141. I favor the employment of a limited number of apprentices for I believe in the journeymen having a chance.

---

No. 142. I believe in both systems; first a school training, afterwards good practical instruction on a building.

---

No. 143. The apprenticeship system is better as boys need experience more than theory in this business.

---

No. 144. I favor the apprenticeship system.

---

No. 145. I prefer the apprenticeship system as boys get more practical ideas of the business.

---

No. 146. I prefer the apprenticeship system, as a boy must necessarily be taught his trade by journeymen as he must depend upon them.

---

No. 147. I favor the apprenticeship system, as there is no way in which a boy can be taught his trade properly in a school.

---

No. 148. I prefer both the school and apprenticeship systems; but have not space in which to give reasons for my opinions.

---

No. 149. I favor the apprenticeship system, as I think that boys get a better practical knowledge of the business when regularly apprenticed.

---

No. 150. A boy gets a great deal more experience at the various kinds of work on a building, than he could in a school.

---

No. 152. I favor an apprenticeship in our trade, not school, as no amount of school practice ever turned out a good working bricklayer.

---

No. 153. A boy working on a building can learn a great deal more in the same time than he could at school.

---

No. 154. I prefer the apprenticeship system, as a boy will take more interest when working with journeymen on a building.

---

No. 155. I favor a preliminary training in a school, as I attended one, and I think I gained more theoretical knowledge than I could have acquired in the same time at actual work on buildings.

No. 157. The apprentice gets more practical ideas at actual work than he will at school.

---

No. 158. Apprenticeship system, as a boy gets the necessary practical insight into the business.

---

No. 159. I think the apprenticeship system the better.

---

No. 162. I have worked with boys who came from training schools, and I never saw one that made a thorough competent bricklayer. They are taught only one kind of work at the school, and could not get along on the building without asking myself or some other of the journeymen how to do their work. They think they know it all when they leave school, but they find their mistake when they are turned loose on a building.

---

No. 164. I favor the apprenticeship system, as apprentices are paid wages while learning their trade, while boys in a school are not; but they have in most cases one year taken from their apprenticeship term if they have gone to school nine months.

---

No. 165. Boys will learn more in a day on a building, than they could in a week in a school.

---

No. 166. I favor an apprenticeship, as boys in training schools are taught but one branch, while on the building they learn everything pertaining to the trade.

---

No. 167. The apprentice gets the greater experience.

---

No. 168. The apprenticeship system by all means, as the practical knowledge must be obtained by actual work on buildings.

---

No. 169. As I have never come in contact with a graduate of a training school I cannot venture an opinion.

---

No. 170. I believe in the apprenticeship system, as when boys work with journeymen they have a better chance to learn the trade properly.

---

No. 171. An apprentice on a building makes the best and most practical mechanic.

---

No. 172. No. I do not favor training in an industrial school, as there are too many boys now who are learning the trade on buildings.

---

No. 176. I favor both systems; as both are good.

---

No. 177. Boys from the industrial schools make the best workmen.

---

No. 178. I favor the apprenticeship system, as it takes practice to make perfect.

No. 179. Yes, I favor apprenticeship system, as boys who learn the trade regularly make the best tradesmen.

---

No. 180. I am in favor of the apprenticeship system, as they make the most practical men.

---

No. 181. Boys who are turned out from the schools are just so much more labor on the market; and they deprive our own boys of the chance to learn the trade.

---

No. 182. I favor the apprenticeship system.

---

No. 183. I prefer the training school, as boys from them are not kept at the laboring or rougher kinds of work so long.

---

No. 184. I cannot answer correctly, as I have not had any experience with boys from training schools.

---

No. 185. I favor an apprenticeship, as when a boy is at the end of his term he usually is a good workman, the other is not, for some time after.

---

No. 187. I favor both systems; first to give the boy a year's preliminary training in a school, and afterwards about two years on buildings.

---

No. 188. The apprentice makes the better mechanic.

---

No. 189. As to the difference between the training in the industrial school and the apprenticeship system, I would say that I have never formed any opinion on the subject.

---

No. 190. I favor an apprenticeship, as a boy will learn more on a building or at jobbing than he will at a training school and he will not be so likely to run away and take a journeyman's place as a graduate of a school will.

---

No. 191. I favor the former, as it gives the boys belonging to the poorer classes, better opportunities to learn the trade.

---

No. 192. The apprentice gets more practice and at various kinds of work.

---

No. 193. I favor the apprenticeship system, as better workmen are turned out by it.

---

No. 194. I favor the apprenticeship system, as practice is better than theory.

---

No. 195. A boy can learn more on a building than he can in an industrial school.

---

No. 196. The apprenticeship system turns out the best workmen.

No. 197. I do not favor a training in an industrial school, because they cannot learn as much as by working on a building.

---

No. 198. I favor the apprenticeship system, as boys must work on buildings along with journeymen to be competent workmen.

---

No. 200. I favor a four years' apprenticeship term, as then the boy will make a good workman as he will have had plenty of actual practice.

---

No. 201. I favor an apprenticeship system, as the boys turned out of industrial schools tend to crowd an already overstocked labor market.

---

No. 202. I favor the apprenticeship system, as they turn out to be the smarter workmen.

---

No. 204. I am partial to both systems, as the schools give boys the ideas and when they get to be apprentices they are taught the various methods of working.

---

No. 205. I favor the apprenticeship system, as boys to make good workmen must have a practical training.

---

No. 206. I favor the apprenticeship system, as I have worked with boys from industrial schools and it seemed as if they had to learn everything over again when they went to work outside.

---

No. 207. I favor an apprenticeship system, as a boy can learn more on a building by watching journeymen work, and of course he has to work harder.

---

No. 210. If a boy has the intention of starting in business for himself after he has acquired his trade then he is better for a preliminary training in an industrial school, as he can get a knowledge of drawings, plans, etc. If not, he can learn more by actually working on buildings.

---

No. 213. Apprentices make better mechanics.

---

No. 214. Apprentices make the best and most practical workmen.

---

No. 215. Apprentices from the industrial schools receive a time allowance; besides, they understand the laying out of a building from plans. Master builders exact plenty of work from boys but give them no instruction with regard to drawings or plans.

---

No. 216. I favor the apprenticeship system, as the boy gets a knowledge of all kinds of building and jobbing work.

---

No. 217. I am in favor of the apprenticeship system, as the schools turn out inferior workmen which injures trade and reduces wages.

---

No. 218. I am in favor of a preliminary training in an industrial

school by all means, and any boy who wished to learn bricklaying should first go one or more years to a training school, as he gets better mechanical ideas, and learns to work by scale and gets to understand plans. drawings, etc.

---

No. 219. I favor an apprenticeship system, as if the boy has any education he can learn more on the job. In the school he is taught to work by plans. He is not taught that as an apprentice, that is all the difference. In answer to the question as to the use of machinery affecting the rate of wages, it has affected the wages of hod-carriers and mortarmen, as in Philadelphia there are several large plants where mortar is made by machinery, which tends to reduce the number of laborers, and also their wages.

---

No. 221. I favor the apprenticeship system, as the boy gets the opportunities of learning all branches of the business he intends to follow.

---

No. 222. I favor the former, as the apprentice has a chance of learning how to do a greater variety of work which is of great advantage to the boy and gives him experience.

---

No. 225. I am in favor of the apprentice learning this trade by working on a building. There are, so to speak, "tricks in all trades," and different men have different ways of working, so that the boy will have opportunities to study the various ways.

---

No. 227. A boy who has received a preliminary training in an industrial school would be likely to have his ideas formed or fixed and it would be a difficult thing to change them; so I must say that I prefer the regular apprenticeship system for teaching a boy this trade.

---

No. 228. A regular apprentice gets a better show.

---

No. 229. I favor both systems; as the boys from the schools are better informed and are enabled to take up the trade more intelligently than the boy who has had no previous training.

---

No. 230. The apprenticeship system, as a boy cannot become a practical mechanic at this business if he learns his trade in an industrial school.

---

No. 232. Both systems are good; as I am of the opinion that boys who acquire their trade under both systems make better workmen.

---

No. 234. I favor a training in an industrial school, for the boy has a knowledge of the business which is of great use to him on going out on new work, and there is one year taken off his regular apprenticeship term for his school term.

---

No. 235. I favor the apprenticeship system, as houses, factories, boiler-setting, etc., cannot be built or done in schools, and there are too many so called mechanics turned out from them.

No. 236. A bricklayer cannot become proficient otherwise than by a practical training at actual work.

---

No. 237. I favor the apprenticeship system as boys cannot get the practice in schools.

---

No. 238. I favor the apprenticeship system, because boys have better advantages in learning the trade.

---

No. 239. I do not believe in the industrial school is the place to learn this trade; the proper place is where the work is actually being done.

---

No. 240. I favor the apprenticeship system, because on the building the theory as well as the practice is required.

---

No. 242. I do not believe there is any difference between them, and I have no reasons for my opinion.

---

No. 244. I favor the apprenticeship system on account of the greater variety of work he has to do; and then he is constantly under the eyes of the journeymen or employer.

---

No. 245. I favor the apprenticeship system. In our trade I do not think that the school does anything but give the boy instructions in the way to use his tools, and of the materials to be used, etc. The trade is really learned after they commence work on buildings, as they see the work in all its different forms, and get a chance at all kinds.

---

No. 246. I am in favor of the apprenticeship system, as when a boy learns his trade in that way and is sent out to do a job he knows that he can do it; while the boy from the school thinks he can and he finds his mistake afterwards. Of course there may be exceptions to this rule.

---

No. 247. I favor the apprenticeship system, as the ideas acquired by boys in industrial schools will not answer when they are tried at actual work.

---

No. 248. I prefer a preliminary course in a trade school as I think it a great help to a boy.

---

No. 249. I favor the apprenticeship system as a boy has more practical experience.

---

No. 250. I favor an apprenticeship, as I think a boy learns the trade more thoroughly.

---

No. 251. I favor a previous training in an industrial school, and then to finish as an apprentice. I commenced to work at bricklaying when I was thirteen years of age; if I could have gone to an industrial or training school for three or four years first, it would have greatly benefited me. I am glad to say though that the rules

of the Bricklayers' Association in Philadelphia, will not permit boys to be apprenticed to the trade at so early an age and it is best so.

---

No. 252. I favor the apprenticeship system, as it turns out better mechanics.

---

No. 253. I favor an apprenticeship, as in a school he only gets the theoretical part of the trade, while on a building he gets both theory and practice.

---

No. 254. I prefer the apprenticeship system, because as an apprentice the boy learns the trade practically; in a school he does not.

---

No. 255. I am in favor of a regular term of apprenticeship. In a trade school a boy only gets an insight of the business that perhaps enables him to take the place of a regularly trained bricklayer.

---

No. 256. I prefer the apprenticeship system, because boys learn their trade more thoroughly.

---

No. 257. I favor an apprenticeship, as I believe in every boy who wishes to learn this trade serving a regular apprenticeship with a master bricklayer.

---

No. 258. I favor an apprenticeship, but not in the school, as when they are through with the school they have to learn the trade over again and a great many of the boys become discouraged and quit the business entirely.

---

No. 259. I prefer the industrial school, because a boy gets better and more useful ideas of work in a school than he could on a building.

---

No. 260. I am in favor of the apprenticeship system, as practice is preferable to theory.

---

No. 261. I prefer the apprenticeship system, as boys get more experience and see more different kinds of work done on buildings.

---

No. 262. I am in favor of the apprenticeship system, as I do not think they get practical knowledge in a school or college.

---

No. 263. I favor an apprenticeship term of not less than four years, as in that time the boy will work with perhaps hundreds of different journeymen and so will get better ideas of his work.

---

No. 264. I believe in an apprenticeship system as I think a boy has a better chance.

---

No. 265. I am a retired bricklayer and I served a regular apprenticeship of three years, but I would prefer a training in an industrial school, as it would tend to increase the welfare of the boy who wishes to learn the trade.

No. 266. I prefer an apprenticeship system, as a boy can get a better knowledge of the trade on a building.

---

No. 268. I favor an apprenticeship system, because a boy can get a better idea of the practical part of his trade by working on a job with a gang of mechanics than he can by having but one instructor, as is the custom in a training school.

---

No. 269. I favor an apprenticeship system. I served six years with my father who was a contractor, and every man who is a master workman in this business likes to have as many apprentices as he is allowed by the rules of the association.

---

No. 270. I am in favor of both, as I think that a boy who has had a training in a school makes a better workman after he goes regularly to his trade.

---

No. 271. I prefer the apprenticeship system, as a boy gets a more practical training. My reason for this opinion is that I have had experience with both regular apprentices and boys from the schools.

---

No. 272. By the apprenticeship system, boys become better and more practical workmen.

---

No. 273. I believe in a regular apprenticeship system, as theory without practice is of very little use to a man who has to make his living at bricklaying.

---

No. 274. I favor a training in an industrial school and afterwards an apprenticeship of about two years on a building.

---

No. 275. I am a member of the Journeymen Bricklayers' Association of Philadelphia, and the idea that all members of that organization receive the same rate of wages is erroneous, as members may, and many do receive more than the regular fixed rate of wages. I always received more than the regular rate during the ten years I worked in Philadelphia, which is evidence that the general opinion that such organizations bring all members on the same plane as regards the rate of wages is not founded on fact.

The "Williamson Free School of Mechanical Trades" in Delaware county near Philadelphia, gives its students a good practical education in connection with trade work. Four trades are taught there, viz: bricklaying, carpentery, machinist and pattern-making, and achitectural and mechanical drawing pertaining to the above trades is also taught. The boys who purpose learning bricklaying and carpenter work are taught to draw complete plans of buildings and all important details connected therewith, also other structures such as boiler-walls, stacks, etc. Calculating the cost of such structures is also a very important part of the education, and receives very careful attention.

As a result of the preliminary training which is received in this school by the students, there is an agreement between the authorities of the school and the master builders, also the Journeymen Bricklayers' Protective Association by which the students in brick-

laying who desire it are placed with a master bricklayer until they reach the age of twenty-one years by which they get from one to two years' practical experience with journeymen on buildings, etc., so that when they reach their majority they are much better prepared for their future labors than those boys who spend their entire apprenticeship in the usual way, with contractors.

The minimum wages for such boys is seven dollars per week which is the rate of wages paid to boys in the last year of their apprenticeship, while students who are specially recommended for ability receive more.

The course at the school is three years; four hours each day is spent at trade work, and four hours in class for general education.

---

No. 276. I am in favor of the apprenticeship system. I own that the industrial schools are very good institutions, but I am in favor of workmen being protected and the school will turn out too many mechanics and they will eventually injure the trade.

---

No. 277. The apprenticeship system gives the boys a more practical knowledge of the business in all of its branches.

---

No. 278. I favor the apprenticeship system, as it gives a boy greater opportunities to learn.

---

No. 279. I favor an apprenticeship system, as poor boys have not the time to spare to go to school, but must earn wages by going as apprentices.

---

No. 280. I favor both systems, but I would like the boys from the schools to be subject to the journeymen's control so that the trade should not be overstocked. The school gives the boy the opportunity of getting the technical part of the trade. The bosses like to get boys from the schools, as they are competent to do plain work at which sort of work they are kept during their term of apprenticeship. In some cases grown men who attend school for a year are put into the journeymen's society and then they call themselves bricklayers, but in fact they are nothing but botchers.

---

No. 281. I am not competent to form an opinion, as I have never worked with a pupil from the school.

---

No. 282. I favor both systems; as I believe that an apprentice should be competent to understand plans and to lay out work as well as to do the work, if he would be classed as a skillful mechanic. My earnings for each year from 1883 to 1894 have been as follows: 1883, $667.03; 1884, $622.87; 1885, $723.23; 1886, $828.45; 1887, $789.98; 1888, $717.40; 1889, $758.65; 1890, $882.75; 1891, $737.15; 1892, $797.71; 1893, $895.47; 1894, $652.74.

---

No. 283. As I have never studied the difference between the two systems, I have no opinion to offer.

---

No. 284. I favor the apprenticeship system, as a boy can learn more on the buildings.

No. 286. I favor an apprenticeship for three years or more as when boys come out of industrial schools they know very little of a building, but go for what are termed "improvers" for apprentices' wages.

---

No. 287. I favor the apprenticeship system, as they get more experience and a more thorough knowledge of the business.

---

No. 288. I am in favor of the apprenticeship system, as it is conducted under the rules of the Bricklayers' Union in Philadelphia, viz: one apprentice for every ten journeymen.

---

No. 290. I favor the apprenticeship system; my reasons are that a boy when serving his time has a wider scope for his abilities and gains more practical experience.

---

No. 291. I favor the apprenticeship system, as boys are not required to serve a sufficient length of time in the schools.

---

No. 293. The apprenticeship system is the more beneficial to our trade.

---

No. 294. I favor an apprenticeship system. My reasons are that a boy will get a better practical idea of his trade under the eye of his employer.

---

No. 296. I favor the apprenticeship system, as a bricklayer's son has a chance to learn his fathers' trade under that system.

---

No. 297. I favor both systems; but I would have the regular apprenticeship come first, and afterwards a course in an industrial training school.

---

No. 298. I favor the training school for instruction and the apprenticeship for practice, providing the boss would not keep the boy on the one kind of work all the time.

---

No. 299. Boys who serve a regular apprenticeship turn out to be much better mechanics; my reasons are that I know from experience.

---

No. 300. I believe in a regular apprenticeship term for a boy to become a practical mechanic.

---

No. 301. No boy can become a thorough bricklayer unless he gets his training on a building.

---

No. 302. I think a two years' course in a school and a like term as an apprentice would be the best plan for a boy. My reasons are, that the school term would be a benefit, as some bosses are prone to keep the boy on rough work during his whole term, and never give him a chance to learn the finer branches of the trade at all.

---

No. 303. I favor the apprenticeship system, as experience is the

best teacher, for there cannot be the same work in a school as will be found on a building outside.

---

No. 304. I favor an apprenticeship system. The school is all right for the theory, but actual working at the trade turns out the best mechanics.

---

No. 305. The apprenticeship system is better for the arts and mysteries of the trade can best be learned on the building.

---

No. 307. I favor the apprenticeship system, as a boy can never learn in a school what he can on a building. In answer to question 17, would say that the use of hoisting machines to carry bricks up to the top of buildings has resulted in lowering the wages of hod-carriers from $2.50 to $1.50 per day, and the introduction of machine mixed mortar has displaced a great many bricklayers' laborers.

---

No. 308. I prefer the apprenticeship system, as boys do not have enough practice in the schools.

---

No. 309. I favor the apprenticeship system. First, because practice makes perfect, and secondly, so that the number of apprentices may be limited.

---

No. 310. Apprentices have more advantages.

---

No. 311. I favor the apprenticeship system, as the boy gets a more practical experience at his trade.

---

No. 312. I favor an apprenticeship system. The schools are all right for the ideas, but the boys cannot learn the practical part of the trade except on a building.

---

No. 314. I prefer the apprenticeship system as to learn a trade properly, a boy must work with different journeymen.

---

No. 315. I most earnestly favor the apprenticeship system, as the apprentice gets both theory and practice; the schools teach theory alone.

---

No. 318. I favor the apprenticeship system, as to be a practical mechanic a boy must work on a building.

---

No. 320. I favor the apprenticeship system as I do not know anything about schools. There is more to be learned on a building than in a school.

---

No. 321. I favor an apprenticeship system under a master who is himself a good mechanic so that the boy may be properly equipped to earn his bread and butter.

---

No. 322. No training in a school can turn out a first-class bricklayer; I have seen enough of that in this city.

No. 323. I favor the apprenticeship system, as boys have more opportunity to learn their trades properly.

---

No. 324. I have no knowledge of the workings of the industrial training schools, so I cannot give an opinion.

---

No. 325. I favor the apprenticeship system, as it is only by working with different journeymen and learning the various ways of working that a boy can become proficient.

---

No. 326. I favor the apprenticeship system, as they cannot build houses in trade schools. The school for a boy to learn is outside on buildings.

---

No. 327. I am in favor of the apprenticeship system, as a boy learns the routine work better on outside work.

---

No. 329. I favor the apprenticeship system, as he gets a chance at a greater variety of work.

---

No. 330. The apprenticeship system by all means, as the schools turn out too many worthless mechanics who ruin the trade.

---

No. 331. I favor training in an industrial school, because matters pertaining to the trade are thoroughly explained to boys who attend them; whereas on a building no one has the time to devote to explanations.

---

No. 332. I favor a regular apprenticeship system as being the more practical.

---

No. 333. I favor the apprenticeship system as by the other system the trade will soon be overstocked.

---

No. 334. I favor apprenticeship, as a boy would be able to understand better what he saw at work outside than what would be explained to him at a school.

---

No. 335. A boy can only get the ideas in the school, whereas he gets all on the building.

---

No. 336. I favor the apprenticeship system. No schools, as they turn out too many so called mechanics and a regular journeyman is unable to get employment.

---

No. 337. The apprenticeship system turns out the best workmen.

---

No. 340. I favor the apprenticeship system as being the more practical.

---

No. 341. The apprentice by all means, as he gets more practical knowledge about the buildings and learns the different ways of working.

---

No. 342. I favor a boy learning his trade on the building.

No. 343. I favor the apprenticeship system. I am a builder and my apprentices work beside me and are constantly under my eye.

---

No. 344. Yes, I favor the apprenticeship system. My reason is that when a boy has learned his trade under that system he is a better mechanic than one who is turned loose from an industrial or training school.

---

No. 345. I do not favor training in the industrial school, as it causes the labor market to be overstocked.

---

No. 346. I am in favor of the apprenticeship system, as the boy in the school is too much confined, and to be a competent workman he must finish his trade on the building, and besides he is not obliged to serve the same length of time that a regular apprentice does.

---

No. 347. I favor the apprenticeship system, as it turns out the best and most practical mechanics.

---

No. 348. I favor the apprenticeship system, because never having been in an industrial school I do not know anything about their management.

---

No. 349. I favor an apprenticeship system, as under it, the boy gets a better and more practical experience.

---

No. 350. No industrial schools. I favor the apprenticeship system as the boy should work on the building and under the eye of his boss.

---

No. 351. I favor the apprenticeship system, as experience is the best teacher.

---

No. 352. I favor the former, as it is the more practical, the other is only theoretical.

---

No. 354. The apprenticeship system by all means, as under it, boys have the better chance of learning the trade.

---

No. 355. I favor the apprenticeship system, as the schools turn out too many boys who take the places of men, and will eventually cause wages to be reduced.

---

No. 356. I am in favor of the apprenticeship system, because to get his trade properly, a boy must work outside where he will have the advantage that is to be gained by being changed about at different kinds of work.

---

No. 357. I prefer the apprenticeship system as it is the best training for a boy and it also prevents our trade from being overrun by incompetent labor.

---

No. 358. I favor the former, as the instructions given in the training school is only theoretical.

No. 359. I favor the apprenticeship system, as in the industrial training schools a theoretical system is taught which is of very little use on a building.

---

No. 361. I favor a training in a school, as I think it is a very good thing for a boy.

---

No. 362. The apprenticeship system turns out the best mechanics.

---

No. 363. In answer to the question, "Are apprentices employed at your trade?" I answer, yes, they are, but the trade unions dictate terms. There should be no necessity existing for trade schools, nor would there be under an honest government, but dishonesty brings all sorts of necessities. This government seeks by a system which it calls protection to fill the country full of home markets which means a redundency of foreign labor. The workingmen, although they favor home markets take notice to fight this redundency by proscribing and hindering our native youth from learning trades; and then come trade schools to combat trade unions. Three kingdoms arrayed one against the other. (sic.)

---

No. 364. I favor the apprenticeship system if the apprentice serves the full term at the trade. I do not favor a school term at night after a boy works eight or nine hours a day for four years.

---

No. 365. I favor a combination of both systems. There are many things pertaining to the trade which can only be learned on a building, hence the advisability of a short apprenticeship following a course in an industrial or trade school.

---

No. 366. I favor an apprenticeship under the old state law as a boy under that system would be more likely to turn out a good mechanic.

---

No. 367. I favor the system that is in vogue in our Bricklayers' Union of Philadelphia, but I have no opinion to express in regard to industrial training schools. As to the introduction of machinery, it has affected the rate of wages of hod-carriers and laborers but not of bricklayers.

---

No. 368. In industrial or training schools boys are not required to serve the required time. Under the apprenticeship system a boy gets the practical part of the trade and the theoretical part comes afterwards.

---

No. 369. I am in favor of the apprentice learning his trade on the building, as he gets better practical ideas. Yet I think it better for a boy to get his trade in a school than not to get it at all.

---

No. 370. I favor the boy serving a regular apprenticeship term as he has a better chance of learning his trade thoroughly.

---

No. 371. I favor the apprenticeship system, as it gives a boy a better chance at different kinds of work.

No. 372. I am in favor of the apprenticeship system, because a boy under it becomes more thoroughly experienced.

---

No. 373. I favor training in a school to be followed by a regular apprenticeship on a building. In the school the theory is acquired; on the building the experience is gained.

---

No. 375. I favor training in a school, as it gives the American boys a chance to get a trade.

---

No. 376. I favor the apprenticeship system, because boys from the training schools can have but very little practical knowledge of the business.

---

No. 377. I am in favor of the apprenticeship system, as I think a new beginner can gather more information on a new building.

---

No. 378. I am in favor of training in an industrial school, to be followed by a regular apprenticeship of two or more years. A boy from a school if he is an apt scholar, will do as much work as some men, but the employer expects a man to do twice as much work as a boy.

---

No. 379. I favor the apprenticeship system, but not in the schools, as it takes constant practice to make a good mechanic.

---

No. 380. I favor the apprenticeship system if it is under the rules and regulations of the trade union, as it keeps a supervision over the boy and looks after his welfare. There is nothing better for boys who wish to learn trades than the trade unions.

---

No. 383. I favor the apprenticeship system, as he receives practical knowledge. I am in favor of our American boys learning trades, because if we debar apprentices, we will in a short time have to depend on foreign labor.

---

No. 384. I favor an apprenticeship system, as work outside is greatly different from work in a school, as the boy has not the extremes of heat and cold to stand that he has on a building.

---

No. 385. I favor the apprenticeship system, as boys learn more quickly and better on a building.

---

No. 386. The apprentice has a chance of learning his trade more thoroughly and makes a better mechanic.

---

No. 387. A boy should learn his trade on the building to become a proficient workman.

---

No. 388. The apprenticeship system in my opinion the better one, as a boy gets the practice on a building that a school cannot give.

---

No. 389. The regular apprentice has more practice.

No. 390. The apprentice always makes the best mechanic.

---

No. 391. The apprenticeship system is preferable, as a boy gets a more varied experience.

---

No. 395. I favor training in an industrial school, as better workmen are turned out from them.

---

No. 396. I believe in the apprenticeship system, as they get a practical knowledge of the different ways of working, by working outside.

---

No. 397. Apprentices only can learn the trade properly. The school system is no good.

---

No. 398. I favor the apprenticeship system, as on the building is the place to learn a trade.

---

No. 399. I favor the industrial school system, as beside being educated in his trade, he gets a good education in other branches.

---

No. 401. I favor the apprenticeship system, and my reason is that the industrial schools do not turn out good practical workmen.

---

No. 402. I am in favor of the apprenticeship system where the boy learns his trade on a building.

---

No. 403. Industrial schools turn out too many boys which in time will result in a reduction of wages from an overstocked labor market.

---

No. 404. A boy should serve a regular apprenticeship with a boss bricklayer to be a competent workman.

---

No. 405. I favor the apprenticeship system. My reasons are that a boy gets more ideas which will be of use to him, while at work outside with different journeymen.

---

No. 406. Yes, I know of some boys from an industrial school who are apprentices, and they are not turning out very well. If properly taught they should make better workmen than other boys, as they understand laying out work and consequently taking charge of building operations.

---

No. 407. I favor the apprenticeship system, as a boy cannot learn his trade properly in a school.

---

No. 408. I favor the apprenticeship system, as it gives the boy more practical experience.

---

No. 409. I do not approve of trade schools, as many boys who are otherwise employed during the day attend them at night, which turns out too many workmen and consequently reduces wages.

No. 410. I do favor the apprenticeship system, because it makes a more competent mechanic.

---

No. 411. I do not favor a school training, as I think that if a boy learns his trade outside he will have a great deal more knowledge of the different methods of doing work than he can get in a school.

---

No. 413. I favor both systems. A mechanic is nothing more than a higher grade and better paid laborer, and no boy should be debarred from learning a trade unless from stupidity or idiocy.

---

No. 415. I favor the apprenticeship system, as a boy has a better all around experience at his work.

---

No. 416. I am for the apprenticeship system, as boys from the schools are no good, because they do not have the practice that they would get on buildings with skilled workmen.

---

No. 418. I have no choice in the matter.

---

No. 419. I am in favor of an apprenticeship system, as boys who are employed outside, work at many different kinds of work on buildings. At a school they are only taught the theory of the trade.

---

No. 422. I favor the apprenticeship system, as the boys get more experience and also learn to work faster.

---

No. 424. I am in favor of the apprenticeship system, because when a man has served an apprenticeship he is able to do a good job of work, while the man who has learned the trade in a school, is only fit to watch him while he does it.

---

No. 427. I favor the apprenticeship system, for I think that a boy should serve a regular term to make a good mechanic, and if he has the opportunities he should get a term in an industrial school at nights.

---

No. 430. I believe the boys get more practical knowledge by the apprentice system.

---

No. 431. I favor the apprenticeship system, as I believe boys get more practical knowledge of the trade than they can in an industrial or training school.

---

No. 432. I think the boy gets a better insight into the various methods of working while on a building than he could possibly get in a school.

---

No. 434. A boy cannot learn his trade thoroughly in a trade or industrial school because he does not have sufficient time; therefore, I prefer an apprenticeship on buildings of various kinds.

---

No. 437. I favor a boy learning a trade where he will in future have to work. I mean on a building, as he can learn more there than in a school.

No. 438. I prefer an apprenticeship system, as under that, the journeymen can get their sons a chance to learn the trade. The industrial schools are the means of putting too many at the trade.

No. 440. I believe that an apprentice should learn his trade on a building, because in a school he cannot get the opportunities to do the various kinds of work. A boy should work beside a good and competent workman, who can work rapidly, so that he may learn to work in like manner, and be of some profit to his master. The hoisting machines affect the wages of bricklayers' laborers, as where a hod-carrier gets $2.75 for a day's work, the men who wheel bricks to and from the hoisting machines, get $1.50, and the machines also reduce the number of laborers which was formerly required.

No. 442. I favor both, as when a boy attends a training or industrial school for a year he is obliged to serve only two years with a master bricklayer.

No. 443. I favor the apprenticeship system, as I approve of a boy learning on the building.

No. 444. I favor an apprenticeship system. I do not know anything about the industrial schools.

No. 445. There is too much theory in industrial schools. A boy learns more and learns to work more rapidly on a building.

No. 446. I favor the apprenticeship system, as a boy must learn to work on a scaffolding.

No. 447. I have worked on jobs with boys who had spent a term in training schools, and they could not do as much work on buildings as boys who had been taught on them.

No. 448. I do not believe that boys who have been taught in industrial schools, are able to compete with boys who learn their trade on buildings.

No. 451. Apprenticeship gives the boys a more practical experience.

No. 452. I favor the apprenticeship system and the trade to be learned on the building.

No. 454. Regular indentured apprentices make the best workmen.

No. 455. I do not favor the schools, as they take the work from too many journeymen.

No. 456. I favor the apprenticeship system, for the boy has the advantage of learning all branches of the business with competent mechanics.

No. 457. I favor the apprenticeship system, as a boy can learn more on a building than he can in an industrial school.

---

No. 458. I favor an apprenticeship system, as my opinion is that a boy by serving his time with experienced jounrneymen can get a better and more practical idea of his trade than he can by attending school.

---

No. 459. I favor the industrial school training, as the theory of the trade is taught them in the schools, and they make much better and brighter mechanics.

---

No. 460. I prefer the apprenticeship system, as I do not think that anyone can learn bricklaying thoroughly without working at all kinds of work, which of course they cannot be taught in a training school.

---

No. 461. I favor the industrial school training, as boys from them are better informed.

---

No. 462. I have not considered the matter, so cannot give an intelligent opinion.

---

No. 463. I favor the apprenticeship system, as a boy will learn more in less time—that is, of course, if he takes interest in his work.

---

No. 464. I favor an apprenticeship system for men in our trade with master bricklayers and outside of trade schools.

---

No. 466. I am in favor of an apprenticeship system, as boys go to those schools for two or three years and then are turned out to take the places of mechanics.

---

No. 467. I favor the apprenticeship system, as I know nothing about the schools.

---

No. 468. I favor an apprenticeship system, as it takes long practice to learn the various methods of working.

---

No. 469. I favor the apprenticeship system, as boys get more practical knowledge and have the opportunity of seeing the various methods of doing work by journeymen.

---

No. 471. Apprentices make better mechanics than boys from the training or industrial schools.

---

No. 473. I favor a regular apprenticeship system, and my reasons are that there are hundreds of botch bricklayers in Philadelphia who have been turned out of the trade schools, with little or no practical knowledge of the business.

---

No. 474. I favor an apprenticeship system, as the boys get only the ideas in the schools and a boy requires a great deal of practice on buildings to learn his trade properly.

No. 475. I favor the industrial school training, as in the schools a boy gets an opportunity to learn the use of plans, etc., and is thereby enabled to become a better workman.

---

No. 476. I am in favor of an apprenticeship system, because under it a boy acquires a more practical knowledge of the trade.

---

No. 477. The apprenticeship system turns out the best and most practical workmen.

---

No. 478. I favor the school training, as in the school they have instructors, whereas on the building a boy usually has to pick up his trade in the best way he can.

---

No. 479. I favor the apprenticeship system, as under it a boy learns his trade better.

---

No. 480. The apprentice makes the better workman.

---

No. 481. I favor both. I would have the boy spend, say, a year in the school, and three years at actual apprenticeship in work on buildings. The introduction of machinery has had no effect on this business only so far as it has affected the bricklayers' laborers, but the increasing use of iron, stone, terra-cotta, etc., in large building operations, has tended to reduce the number of skilled bricklayers that are needed.

---

No. 483. I favor the apprenticeship system, as it takes a boy's entire period of apprenticeship at actual work on different styles of building to make him a proficient workman.

---

No. 848. I favor a regular apprenticeship, and a boy should be regularly indentured as boys were in the earlier times, then they would be taught their trades properly and become competent journeymen who would be capable of doing any sort of work pertaining to the trade.

---

No. 485. I favor the former, as a boy has a more beneficial experience on a building under a good boss who is himself an experienced workman than he could get in a school where ideas and theories are taught.

---

No. 486. I favor an apprenticeship. A boy who has been taught in a school, finds the difference when he comes to work outside on a high scaffold. There I think that the boy should acquire his trade where he is to work in future, viz: on the building.

---

No. 487. I favor the apprenticeship system, as it turns out better mechanics than schools.

---

No. 489. I favor the apprenticeship system, as schools take the matter out of the hands of the master bricklayers. In my opinion the apprenticeship system should be regulated or conducted as follows: when a boy desired to learn the bricklaying trade, or in fact

any trade, he should go to work at it for a probationary period of say three months; then if his employer was satisfied that he would make a bricklayer, he should be regularly indentured and be compelled under penalty of the law to serve his full time. In my opinion it is a poor plan to have a boy bound and compel him to work at a trade which he has no adaptability for, when he might make a good workman at some other trade.

---

No. 490. There are a thousand and one things to be done on a building that cannot be taught in an industrial or trade school.

---

No. 492. I favor the apprenticeship system, but not in a training school, as I am of the opinion that school training is an injury to the trade.

---

No. 494. I favor the apprenticeship system, as I believe in practice only.

---

No. 496. I believe in the apprenticeship system, as the work done in the industrial schools is intended to be torn down again. A boy who works on a building and with different journeymen gets to see and understand all methods.

---

No. 499. I favor an apprenticeship of not less than four years. I have worked both with boys from the schools and regular apprentices, and the principal objections to boys from the schools is that they think they know it all, and set themselves above men who have worked at the business for years. In fact they cannot be taught anything.

---

No. 500. I favor an apprenticeship system as better workmen are turned out under it.

---

No. 503. The apprenticeship system turns out the better tradesmen.

---

No. 504. Apprentices make better bricklayers.

---

No. 506. I believe the apprenticeship system the best, as a boy has greater advantages on buildings.

---

No. 507. I favor the apprenticeship system as the trade can be learned in a more practical manner under it.

---

No. 509. I favor an apprenticeship system, as practical experience is the best teacher in my opinion.

---

No. 510. The apprentice on a building gets better instruction and a more practical knowledge of the trade.

---

No. 511. I favor both systems. A boy should attend a school for about two years, then two years regular apprenticeship on buildings. The first term he would get the theoretical part and in the latter two years the practical.

No. 512. I favor the former, as the boy gets the real and practical part of the business at his work.

---

No. 513. I do not favor the industrial school training, as I do not see any use in it. We had a boy from one of the schools, and he was not nearly as useful as another apprentice who had never attended one of them.

---

No. 514. I favor an apprenticeship system, as under it a boy can learn his trade more thoroughly.

---

No. 515. I favor an apprenticeship system as according to the rules of the Bricklayers' Union a boy must serve out his full time and learn the trade thoroughly or he cannot get employment in Philadelphia afterwards.

---

No. 516. I favor an apprenticeship, as a boy under it gets a thorough knowledge of the different methods of working and has more practice.

---

No. 518. I do not favor either systems, as there are too many bricklayers now for the amount of work there is to be done at present.

---

No. 519. I favor the apprenticeship system, as the apprentice makes the best workman and commands the best wages.

---

No. 520. An apprenticeship should be served on buildings and not in schools. The apprentice is under the supervision of the journeymen who teach him his trade. Even if he has gone to school, he should be compelled to serve part of his time at actual work on buildings.

---

No. 521. I do not favor a training in industrial schools, and my reasons are that it deprives poor boys who cannot afford to attend them of a chance of learning trades and becoming practical mechanics, and all the boys with whom I have worked who came from them were worthless as mechanics.

---

No. 524. The apprentice gets a more practical experience.

---

No. 525. An apprenticeship system, as a boy who works with different men has a better chance of learning correctly, as it is difficult to find two men who work exactly alike, and the apprentice has the opportunity of learning all methods.

---

No. 526. Apprentices get practical experience on buildings that it would be impossible for them to acquire in schools, therefore, I favor the apprenticeship system.

---

No. 527. I think the apprenticeship system is best.

---

No. 528. There are too many apprentices in our trade now, but I think that boys from industrial schools make better mechanics.

No. 530. The school is all right for the boy to get the rudiments of the trade in, but I approve of a boy learning his trade on buildings. Almost all buildings are of different design and conception, and there are many things connected with them that could not by any possibility be taught in schools.

---

No. 533. I favor the apprenticeship system, because under it a boy learns his trade more thoroughly than he can in any school.

---

No. 534. I favor the apprenticeship system, as I have had experience with boys under both systems and I can speak understandingly on the subject.

---

No. 535. I am in favor of the apprenticeship system, as a boy gets better chances for a trade at actual work.

---

No. 536. I favor a training in an industrial school. My reasons are that it gives more boys a chance to get trades.

---

No. 537. I favor the apprenticeship system, as boys learn the trade better while working on buildings with journeymen.

---

No. 538. I like the apprenticeship system, as the boy gets a better practical idea of the trade.

---

No. 539. I favor the apprenticeship system, as the other is merely theory and no practice.

---

No. 541. It is difficult to determine which system is best, although boys from schools have to be taught over again under the supervision of a boss bricklayer.

---

No. 542. Well my opinion is that this trade cannot be taught to a boy in any other place than on a building.

---

No. 543. I favor the former, as boys get the practical experience.

---

No. 544. I favor a combination of both systems. I do not favor the entire instruction of this trade in training school. At least part of the time should be given to work on buildings outside.

---

No. 545. I favor the apprenticeship system, as it gives a boy a more thorough training in all branches of business.

---

No. 546. As I have never worked with any graduate from an industrial school, I cannot form an opinion.

---

No. 548. I favor a preliminary training in an industrial or training school, and some practical experience as an apprentice afterwards. My observation and experience warrants me in my belief.

---

No. 551. I favor the apprentice system. My reason is that the boy who is trained in a school never gets the experience that the other gets.

No. 552. I favor the apprenticeship system, as the apprentice is learning all branches of the trade when he begins to work from the foundation.

---

No. 553. I believe that a combination of both systems is best for a boy, as he gets both theory and practice.

---

No. 555. I am in favor of an apprenticeship system, as I would sooner see boys working on the wall outside than in a training school.

---

No. 556. I favor the apprenticeship system, as a boy has to work along with journeymen to get a general and practical knowledge of the trade.

---

No. 557. I favor the apprenticeship system, because the school is only for the benefit of boys whose parents can afford to send them, and do not need the wages that the boy would get if regularly apprenticed.

---

No. 559. As apprentices there are different men to take interest in boys and teach them the best methods of working; whereas in industrial schools they have one instructor and they are taught his way, and no other.

---

No. 560. I favor the apprenticeship system, as a boy will learn more outside than he will in a school.

---

No. 561. I favor having apprentices to learn their trades on buildings, as boys learn better by working with men.

---

No. 563. I favor the apprenticeship system, as the training school turns out more employers than workmen. In answer to question 18, I would say that the hod hoisting machines have been the means of doing away with a great number of bricklayers' laborers.

---

No. 564. The apprenticeship system, because when they have finished they understand the trade much better.

---

No. 565. I favor the apprenticeship system, as I have no knowledge of the training schools, nor any experience with their graduates.

---

No. 567. I favor the apprenticeship system, as I think better mechanics are turned out under it.

---

No. 568. I favor the apprenticeship system, as I prefer practice to theory.

---

No. 571. I favor the apprenticeship system as they make better workmen, as it is the every-day practice with skilled workmen that counts, and not theory. There are about three hundred apprentices employed learning this trade in Philadelphia.

---

No. 573. I favor an apprenticeship system, as in my opinion a boy

gains more practical knowledge on a building than he can in any school.

---

No. 574. I favor an apprenticeship, as I don't think much of the theoretical, without the practical part. I have known boys who attended trade schools but who were very little better than boys who had never seen a brick laid.

---

No. 576. I favor the apprenticeship system, because a boy does not get a thorough knowledge in a school, as has been often proven.

---

No. 577. I favor the apprenticeship system by all means. I have worked on a building with boys who had a trade-school training and boys who had not, and the latter were the more proficient.

---

No. 579. I am in favor of the apprenticeship system, as under it a boy has the more practical training and gets a better knowledge of the business.

---

No. 580. Apprenticeship system. A boy can learn more by seeing practical men do the work than he can by getting the information from books.

---

No. 582. I favor training in the industrial schools for many reasons, but principally because they learn to do the better classes of work in them.

---

No. 583. The apprenticeship system, because the boy gets used to the way of working of different men, and learns all the different methods.

---

No. 585. I favor both systems combined, as I do not think they injure the trade any.

---

No. 586. I favor the apprenticeship system, as no industrial school can turn out a mechanic. My observation of boys who have gone to work at this trade has been that they commence with the belief that they know all about it, when in reality they have everything to learn of practical work, which will require a term of a few years on the building.

---

No. 588. Practical experience is requisite in this trade.

---

No. 589. I favor an apprenticeship system, as under it a boy gets more practical experience, which can only be had by working with journeymen on buildings. I acknowledge that a school training would be beneficial to a boy, as he would get the theoretical experience of drafting and working from plans which, unless he was apprenticed under a very careful and methodical master, he would never get at actual work, for in a general way a boy must, so to speak, pick up his trade himself by working with journeymen and watching their methods. The master is only interested in getting as much work out of the boy as he can, of course, there are exceptions.

No. 590. I favor the school training, because a boy pupil gets a knowledge of architectural drawing and is capable of taking charge of building operations. The majority of apprentices who learn their trades on buildings never have an opportunity of seeing a drawing much less of understanding it.

---

No. 592. I favor the apprenticeship system, as a boy certainly sees more of his trade on buildings than he can in a school.

---

No. 593. I favor both systems. Boys who go to school for a period of two years, and who afterwards serve two years on buildings, become first-class bricklayers.

---

No. 594. I do favor an apprenticeship system, as I cannot see how boys can become practical mechanics without.

---

No. 596. I favor the apprenticeship system, as we can better regullate the number that shall be employed.

---

No. 597. I favor the former system because the school term is not long enough.

---

No. 599. Outside apprentices get a better knowledge of the trade than boys in school can.

---

No. 600. Apprentices get a better experience by working on buildings.

---

No. 602. Boys who come from industrial schools understand drafting, plans, etc, but I never yet worked with one who was a good bricklayer.

---

No. 603. I do not favor an industrial school training, as they turn out so called bricklayers too rapidly.

---

No. 606. I favor both systems. About one year of a school term and say three years at actual work outside, so that boys might become competent to do a day's work. I have worked with graduates from schools; they were good workmen but were too slow.

---

No. 607. I prefer the apprenticeship system as being the more practical, the school training being simply theoretical.

---

No. 610. I prefer the industrial school training, as the boys get a better knowledge of the trade. At outside work, if an apprentice is slow to learn, the boss will keep him carrying water and doing errends so that he never gets his trade properly.

---

No. 611. I prefer the apprenticeship system, as boys learn more by working on buildings.

---

No. 612. I favor the industrial school training, as under it there is more care taken in teaching boys the trade.

No. 613. I do not favor the school training, as the term is too short and the result is, that it puts too many hands into the business.

---

No. 615. I favor the apprenticeship system, as boys must have the actual experience on the job.

---

No. 617. The apprenticeship system is the more beneficial to the trade.

---

No. 618. I favor the apprenticeship system. But I will say in this connection that I have no knowledge of the schools, nor have I ever worked with any person from them.

---

No. 619. I favor the apprenticeship system, because the education they get is a practical one.

---

No. 620. I favor the apprenticeship system, because to become proficient workmen, boys must work on buildings.

---

No. 621. I favor the apprenticeship system, as boys who are taught their trade on buildings make the best mechanics.

---

No. 622. I do not favor the training schools, as the boss should have the benefit of the boy's work while he is learning the trade.

---

No. 623. I favor the apprenticeship system, as boys must learn the trade by working with journeymen, and cannot in any other way.

---

No. 624. I think the training schools are all right, but they work injury to poor boys who are anxious to learn the trade, and whose parents need their earnings. They cannot afford the time necessary to attend the schools, and school boys take the places as apprentices which in many instances journeymen are anxious to get for their sons.

---

No. 625. I do not favor training in industrial schools, but under a regular apprenticeship system. I have worked with men who had served three or four years and even at that did not know how to build a corner, and in a trade school they do not have to stand on a scaffold a hundred feet high to lay bricks.

---

No. 626. I believe in the working apprenticeship system, as under it boys learn more.

---

No. 628. Apprentices have more chance at practical work.

---

No. 629. I favor the apprenticeship system, as there are so many kinds of work to be done on buildings that cannot be taught in schools.

---

No. 631. I favor a boy serving a full term as an apprentice to get a full knowledge of the business.

No. 633. I favor the industrial training schools, as it requires less training to make a boy a good practical workman after he commences to work on buildings.

---

No. 635. The industrial school is all right as it brightens the boy up; but it requires a regular term as an apprentice at outside work to make a competent journeyman.

---

No. 636. I favor the apprenticeship system. A boy should start his apprenticeship outside and grow up with it. Of course, they may learn drawing at the industrial school but that it not bricklaying.

---

No. 637. I favor apprenticeships, as the instruction is received from practical mechanics.

---

No. 638. I did not serve a regular apprenticeship, but after a term in an industrial school I went to work under instructions, or as an "improver," as it is known in the trade. I favor the school training, as the boys get the theoretical training and make better workmen.

---

No. 639. I favor a regular four years' term as an apprentice, as boys are instructed better while working with journeymen than they can be in school. In answer to question No. 19, I would say that the introduction of hoisting machines and machine made mortar, has reduced the number and also the wages of hod-carriers 50 per cent.

---

No. 640. I favor the apprenticeship system, as a boy will learn more on a building than he can in a school.

---

No. 641. I am in favor of the apprenticeship system, as they get more practice on various kinds of work.

---

No. 642. I favor the former, as I believe that mechanical skill is more essential in this trade than theoretical training.

---

No. 643. I favor the apprenticeship system, as they get the practical part of the trade and make better all around workmen.

---

No. 645. Apprentice system. Boys who work on buildings see the different methods of doing work.

---

No. 646. The apprenticeship system by all means. A boy will learn as much in a month by working on buildings as he will in a year in a school.

---

No. 647. I favor an apprenticeship combined with a good education. The reasons for my opinions are founded on my experience of over twenty years at this trade, both in England and United States.

---

No. 649. I favor an apprenticeship system for any trade. A boy cannot learn a trade thoroughly except by working on a building or in a workshop.

No. 650. The apprenticeship system by all means. A boy surely can learn more by working on buildings during their erection, than in a school.

---

No. 651. I favor the apprenticeship system, as the trade can be more thoroughly learned at actual outside work; besides a boy becomes acquainted with the journeymen which is of great advantage to him in getting employment when his time expires.

---

No. 653. I favor the industrial training school for they at least tend to keep boys off the streets.

---

No. 655. I favor the apprenticeship system, as industrial schools are not in it for turning out good mechanics. In them it is too much theory and not enough practice, and a boy requires hardening to make a workman at this trade.

---

No. 656. I favor the apprenticeship system. A young man can be taught to lay bricks in an industrial or training school, but he cannot hold a place beside one who has served an apprenticeship.

---

No. 661. Boys learn more on the buildings than in schools. My reason for this opinion is that I have had opportunities to see boys who have served their apprenticeship and those from school work together.

---

No. 622. I do earnestly favor an apprenticeship system, as I think that every American who wishes should have the opportunity of learning a trade, then our country would have mechanics of her own, and would not be obliged to depend so much on foreigners.

---

No. 663. I favor an apprenticeship system, because working on buildings is harder than learning in school.

---

No. 664. I favor the apprenticeship system, because on buildings boys have the work in reality.

---

No. 665. I believe in the apprenticeship system, as a boy at actual work gets better ideas and learns the trade quicker and better.

---

No. 666. I favor a regular apprenticeship system, as under it a boy gets a better understanding.

---

No. 667. A boy can learn more about this trade on a building than he can in a school in the same length of time.

---

No. 668. I favor the apprenticeship system, as no matter how long a time a boy goes to school he has to learn afterwards on buildings.

---

No. 670. I favor the apprenticeship system, because under it, a boy gets a chance to learn all branches of the trade.

---

No. 674. I favor the apprenticeship system as if a boy does graduate from a school he is obliged to serve one or two years at work on buildings.

No. 675. I favor an apprenticeship system on a building under a good boss. A boy on a building has experience at work which he would never get in a school.

---

No. 676. I favor the apprenticeship system before any other, as boys from the schools have to be taught everything over again when they leave to go as apprentices. In regard to other matters pertaining to our trade I would say that there are about three thousand bricklayers in the city of Philadelphia. Now if the State government wishes to do something to promote the welfare of these men why does it not impose a duty or tax on foreign labor the same as it does on foreign products? There are numbers of men who come to this country in the spring, work at bricklaying until cold weather comes again, in the meantime living like animals and then go back home to their own countries to live at ease until the next season comes around.

---

No. 678. I cannot express an opinion as I have never been brought in contact with any pupils of a training or industrial school.

---

No. 680. I am in favor of the apprenticeship system, as a boy gets opportunities of seeing work done in different ways.

---

No. 681. There is more practical experience to be gained as an apprentice. In answer to question 18, I would say that the use of iron, stone and terra-cotta has had tendency to reduce the number of bricklayers needed in large building operations.

---

No. 682. I favor the apprenticeship system, as boys in schools never have the practical experience that boys get on buildings, and the first named never make good practical bricklayers.

---

No. 683. I favor the industrial schools, as boys who attend them have their ideas developed so that they may be better fitted to choose the occupation for which they are best adapted.

---

No. 684. I do not favor training in a school. I have worked with boys from them and they were no good at all at working on scaffolds.

---

No. 685. I favor the apprenticeship system, as the schools never make good workmen unless they learn the trade afterwards on a building.

---

No. 687. I favor both, as boys from the schools who become apprentices at this trade are equal to boys who have served two years at the trade on buildings.

---

No. 688. I favor the apprenticeship system, because a boy obtains more practical knowledge as an apprentice than he can in schools.

---

No. 689. I favor a training in a trade or industrial school, as in them a boy gets a chance to learn his trade, which he will never get with a contractor, as he is driven too much and not given a chance.

No. 690. I favor a school training to a certain extent. I don't think that any boss should be allowed to have more than one apprentice to four journeymen.

---

No. 691. I favor an apprenticeship system, as under it a boy will get more show, better ideas, and will learn to work faster.

---

No. 693. Boys get a chance to do work on buildings that they never get in a school; therefore, I am in favor of the apprenticeship system.

---

No. 696. I favor the apprenticeship system. My reason is that a boy learns his trade better and more thoroughly by working with journeymen.

---

No. 697. I think the time boys spend in industrial or training schools is lost, for they have to be taught on the building afterwards.

---

No. 698. I favor the apprenticeship system, as I do not believe that any boy who has been taught in an industrial school can compete with a boy who has served his time on buildings.

---

No. 700. Yes, I favor an apprenticeship system. My reason is that in the industrial schools they are not obliged to serve the requisite four years.

---

No. 701. I favor the apprenticeship system, as boys under it learn the trade more practically.

---

No. 702. I favor an apprenticeship system because a boy should serve his apprenticeship on buildings to be an efficient workman.

---

No. 703. I favor the apprenticeship system. My reason is, that on a building a boy is taught how to build one story so that it will carry the next. I don't see how he can learn that in a school.

---

No. 704. Apprentices get the practical knowledge, while in the schools only the theory is taught.

---

No. 705. I favor the apprenticeship system, as a boy who serves his time outside, gets better opportunities to see the different methods of different men at work.

---

No. 706. I favor the two systems combined. The majority of the bosses prefer quantity to quality, in other words they want boys who can pile in the most bricks, and when a boy is through in the school he must go to work on a building to become proficient.

---

No. 707. I favor an apprenticeship system, as boys from the schools are very awkward on buildings.

---

No. 708. Apprentices can learn more by working on buildings than in any other way.

No. 709. I favor both systems. Training in an industrial school, first to learn the uses of tools and the theoretical part of the trade, then the practice on the buildings afterwards. In answer to question 17, I would say that the introduction of foreign labor has hurt us more than the introduction of machinery.

---

No. 710. I favor the apprenticeship system, as a great many boys have not the means to attend school and need the wages that they get as apprentices.

---

No. 711. I am in favor of the apprenticeship system, because when he serves his full time on buildings he learns it all; but they only get ideas in school.

---

No. 712. In schools the boys are taught to handle their tools all right, but it takes practice to make perfect.

---

No. 713. I do not believe in training in industrial schools, as the best way for a boy to learn this trade is by serving an apprenticeship with a good master.

---

No. 715. I favor the apprenticeship system, as a boy has a wider scope as an apprentice than he could have in a training school.

---

No. 718. I prefer the apprenticeship system, as under it a boy has a better chance for a practical knowledge of the trade.

---

No. 719. My preference is for an apprenticeship system, as an apprentice doing general work outside would get more practical knowledge than a scholar in an industrial school would.

---

No. 720. A boy has to serve two or three years after he learns in school, and he is not a better workman than the boy who has not gone through a training school.

---

No. 721. I favor an apprenticeship with journeymen. Trade school graduates in the building trades are not able to command full wages, so the result is cheap mechanics.

---

No. 722. I favor the former and do not like the latter, as there is more theory than practice; in other words more talk than work.

---

No. 723. I don't know how it will answer in other trades but in the bricklaying trade I favor the apprenticeship system, as it is the only system under which a boy can be taught properly.

---

No. 724. An apprentice has more chance at the various kinds of work.

---

No. 725. I favor the apprenticeship system, as a boy can learn more about the trade by working at it, than by reading about it.

---

No. 726. I favor the apprenticeship system. I do not believe in

preliminary training but believe that a boy who wishes to learn this trade in particular should go to work at it at once on a building.

---

No. 728. I favor the apprenticeship system decidedly. Industrial schools give only a superficial training, and turn out "botch" mechanics.

---

No. 731. I do not favor an industrial school training, because when boys leave those schools they are not competent to do a day's work as a journeyman.

---

No. 732. I favor a combination of both systems, as theory and practice should go together. The boy should attend school at least two years and then one year at actual work outside.

---

No. 734. The apprenticeship system is best, as a boy should learn his trade on a building.

---

No. 735. I believe in a combination of both systems, as no boy is competent to do a day's work directly after leaving school without going as apprentice to a master builder.

---

No. 736. I do favor training in industrial schools as it benefits American boys.

---

No. 737. Poor boys cannot afford to go to school or rather their parents cannot afford to send them as they need the boy's earnings; therefore the schools crowd out boys who wish to learn the trade but are too poor to go to school.

---

No. 738. I favor an industrial school training, as every apprentice should have a knowledge of plans and architectural drawing, and in a majority of cases a master builder will not allow the apprentice sufficient time to study these things.

---

No. 739. I favor both. I consider that a boy should have one year training in an industrial school where he will get a rudimentary education in the trade, also a knowledge of architectural drawing, the use of tools, etc. Then two years of actual work on buildings. These systems combined turn out better and more competent and intelligent mechanics than a separate course in a trade school, or one entirely upon a building. This has been in operation for some time in Philadelphia, and has proven entirely satisfactory.

---

No. 740. I served an apprenticeship of one year, and in two years I was competent to work at any branch of the trade. I am of the opinion that a boy who works right along nine hours a day at this trade learns it faster and is more skillful than a boy who studies two or three hours of a night can be.

---

No. 741. I favor the apprenticeship system, as it is within the reach of boys who are not educated and who can be taught a trade practically.

No. 742. I favor an apprenticeship system, as the trade as a rule will not recognize a graduate from industrial schools nor make allowance for the time spent in them, and in my opinion a trade school graduate gets the practical knowledge in a school which is necessary to make a good mechanic.

---

No. 743. I favor the apprenticeship system, as under it a boy gets a better and more thorough knowledge of the trade.

---

No. 745. Boys who serve a regular apprenticeship become the best workmen.

---

No. 747. I favor a training in the schools, so that American boys may get good educations and be preferred at work to foreigners who seem to get the best chance for jobs now.

---

No. 748. No boy can learn a trade in school as well as he can with a first-class mechanic or a boss.

---

No. 749. I favor an apprenticeship system at actual work on buildings so that he may work himself and see others work.

---

No. 750. I favor a preliminary training in an industrial or trade school and if bosses would not take any boy as an apprentice who had not had such a training I think it would be better for the trade.

---

No. 751. I favor the regular apprenticeship system, as boys under it have greater opportunities for learning.

---

No. 752. I favor an apprenticeship system, are more practical lessons can be taught on buildings than can be at schools.

---

No. 753. I do not favor a training in a school, as they are conducted now. Boys can learn this trade better when apprenticed to a good firm of practical builders or a good boss who is himself a good mechanic. In the schools they can only get a theoretical knowledge; with a builder they get a practical knowledge.

---

No. 754. The answers to the questions asked in your blank which you will receive from members of our craft will be in many instances incorrect, I mean as to the earnings of bricklayers. The business at best is a precarious one, as for example in the winter months and frequently until the middle of April, work is very generally suspended on account of frost. Of course, some buildings are erected in winter, but work is done only in the warmest hours of the day. During the summer and autumn months we are compelled to lose time from a number of causes, such as waiting for material, not only of our own, but window frames, iron, stone, etc.; and last, though not least, for rainy weather. The large firms as a rule keep a few of their older hands steadily employed on jobbing work, but those so employed are the fortunate ones. I wish to say, however, that after an experience of twenty-five years at the business I do not believe it possible for a bricklayer in the vicinity of Philadelphia, no matter how industrious and sober he may be, to work more than

seven months or in working days say 182. This of course applies to what we would term a very good season for building. In answer to the questions about apprenticeships I would say that in my experience, the best specimens we have had from industrial schools have been conspicuous as failures.

---

No. 755. Regular apprentices make the better workmen.

---

No. 756. I do not favor industrial schools, as boys are never thoroughly taught their trades in them.

---

No. 757. I favor the preliminary school training, as boys can get the practical part afterwards on the buildings.

---

No. 758. I do not favor the school training, as there are too many mechanics now and not enough work for them.

---

No. 759. I favor training in an industrial school followed by at least one year apprenticeship at practical work. Boys who are educated in a trade school followed by practical experience with competent journeymen should make first-class mechanics.

---

No. 760. Apprentices make the best bricklayers.

---

No. 761. I favor an apprenticeship system, as practice makes perfect and a practical experience on buildings and at all kinds of jobbing work is the best for any apprentice.

---

No. 762. I favor a training in an industrial school for the first year; after which, a boy should be regularly apprenticed. The experience that a boy gets in a training school gives him better ideas than he would get on buildings during his first year.

---

No. 765. I favor an apprenticeship system. My reasons are, first that they make better workmen, second that the apprenticeship system does not turn out so many workmen.

---

## PLASTERERS—PHILADELPHIA.

---

No. 1. I favor the apprenticeship system, as a boy can learn this trade better by working on the scaffold.

---

No. 3. I favor the apprenticeship system, as practice not theory is the proper thing at this business.

---

No. 4. I favor the apprenticeship system, as boys who come from the schools are nothing more than botchers.

---

No. 5. I favor the apprenticeship system, as under it boys get better instructions.

No. 7. I favor apprenticeship system, as I do not know much about what is taught in industrial schools. Apprentices get better used to the various styles of work that is done in this business.

---

No. 8. I favor the regular apprenticeship system, and the teaching of the trade in buildings. In schools boys cannot have half the chance of learning this trade properly that they get at the actual work on buildings.

---

No. 9. Yes, I prefer the apprenticeship system, as by serving a regular time a boy will learn the trade more perfectly.

---

No. 10. I favor the apprenticeship system, as the school training is only theoretical.

---

No. 11. I favor the industrial school training. These schools are of great advantage to boys wishing to learn this trade, because there are matters pertaining to the trade which are taught in the schools that no one would take the time to show or explain to boys under the regular apprenticeship system.

---

No. 12. Both systems are good, but there should be some law to oblige or compel a master to give the apprentice instruction in the theoretical parts of the trade, because as business is conducted now, the boy is driven to such an extent, that he does not have the opportunity to get his trade correctly.

---

No. 13. I favor the apprenticeship system, and apprentices should be obliged to serve four years.

---

No. 14. I favor the apprenticeship system, as the boy gets more thorough instructions.

---

No. 15. I favor both systems, as a preliminary training is essential to good workmanship.

---

No. 16. I favor the apprenticeship system, as apprentices learn the trade better and more thoroughly.

---

No. 17. I favor the apprenticeship system, as boys get only the theory in the schools and never acquire the speed which is the most essential qualifications.

---

No. 18. I do not favor a training in a school as it is not practical. In every large operation or building there is something new to learn, and I speak from an experience of twenty-five years.

---

No. 19. I believe in an indentured apprenticeship system. Schools seem to give boys a sort of an idea or outline of the business, and then the majority of the boys think they know it all and they go around from one employer to another and the employers take advantage of them to the detriment of skilled workmen.

No. 22. I favor the apprenticeship system, as when a boy serves three years at this trade he should be competent to do a day's work with any man.

---

No. 23. I favor a regular apprenticeship system, as a boy gets a chance at all the different branches of plastering.

---

No. 25. I favor the apprenticeship system, because a boy learns his trade practically.

---

No. 26. I favor the apprenticeship system as under it, a boy will make a better mechanic, as there are many things to be learned at this trade which cannot be taught in a school.

---

No. 27. I favor the industrial school training, as more attention is given to boys there, than there is in buildings.

---

No. 30. I consider the apprenticeship system better. My reason is that they work with a larger number of men and have a chance to see all methods of working.

---

No. 31. I favor the industrial schools as the best workmen are turned out from them.

---

No. 32. I favor both systems; but no instruction from a book, nor any number of books can make a man a competent mechanic without practical experience.

---

No. 34. I favor the regular old apprenticeship system, as boys from the schools frequently take the places of men who have served four years' apprenticeship.

---

No. 35. I am not sufficiently well acquainted with the workings of the schools to form an intelligent opinion.

---

No. 36. I favor the apprenticeship system, because he has the use of the tools all the time.

---

No. 37. I favor the apprenticeship system, because it makes better workmen.

---

No. 41. I favor the apprenticeship system for it is an impossibility to learn the trade properly in any one building.

---

No. 42. I believe in the apprenticeship system, because a boy learns better in buildings as he has experience at various kinds of work, which he could not get in a school.

---

No. 43. I favor an apprenticeship system at this trade. Training in an industrial school might make a competent workmen of a boy in some trades, but not in this.

---

No. 44. I favor the apprenticeship system, as boys learn more in buildings than they can at school.

No. 45. I favor the apprenticeship system, as a boy can do much better by working with different men and on different jobs.

---

No. 46. I favor the apprenticeship system, as there are too many men now with swelled heads who think they know it all. There is one great fault though with the apprenticeship system, as some bosses use their apprentices more for the purpose of making all they can off the boys' work, and do not take any interest in the way of trying to make good workmen of them.

---

No. 47. I favor the apprenticeship system, as they see and have experience with a greater variety of work.

---

No. 48. I favor the apprenticeship system, as under it a boy gets a better general idea of the business. In answer to question No. 17, would say that the introduction of machine mixed mortar has not affected plasterers, but it has plasterers' laborers, as where is it used, there is one laborer to every three men. Where hand made mortar is used there is a laborer to every two men.

---

No. 50. I favor the industrial school system, as in my opinion boys are taught better and more thoroughly, and are not subject to the temptations in the way of learning to drink intoxicating liquor, etc., that they would be under a boss plasterer.

---

No. 52. I favor an apprenticeship system, as the practice gained through working with skilled mechanics makes boys more proficient and careful at their work.

---

No. 53. Training in the industrial school might do very well if it were all plain work that we had to do. But for all around work a boy must serve a regular apprenticeship and learn with journeymen.

---

No. 55. A boy learns more and has a chance at a greater variety of work as an apprentice than he could in a school.

---

No. 56. I favor the apprenticeship system, as the boy has more opportunities to become a skilled workman.

---

No. 60. To my mind the apprenticeship system is better, as a boy gets to learn the practical parts of the business.

---

No. 61. I favor the industrial school training, as to my mind it is a very good thing.

---

No. 62. I favor both systems.

---

No. 63. I favor both systems, as a boy gets a better chance for his trade by working in buildings.

---

No. 64. I favor the industrial school training, as discipline and a thorough training are essential to making a good workman of a boy.

No. 65. I favor the apprenticeship system, as boys see the work done and do it themselves, which is better than theory.

---

No. 66. I favor the apprenticeship system, as boys make better and more practical workmen when they become journeymen.

---

No. 67. Yes, I favor an industrial school training for one or two terms, and then a boy should finish his trade on a building.

---

No. 68. I most decidedly favor an apprenticeship system, because a boy can receive more benefit from practical work than from theory.

---

No. 69. I favor the apprenticeship system, as under it a boy gets a chance at all kinds of work.

---

No. 70. I prefer the apprenticeship system, as the boy under that system is set to work with journeymen at once and so gets practical instruction instead of theoretical.

---

No. 71. I favor both the apprenticeship and industrial school systems. The industrial school training gives the boy knowledge of the technicalities of the trade and he gets the practical knowledge during his apprenticeship.

---

No. 72. I do not believe in the training schools. The apprentice learns practical work and the school only teaches the theoretical.

---

No. 73. I favor the apprenticeship system, as it is simply impossible for a boy to learn this trade in any one building.

---

No. 74. I favor the apprenticeship system, as under it boys have more experience and better opportunities to learn all branches of the trade.

---

No. 75. I favor the apprenticeship system, as boys from the schools cannot come into buildings and do a day's work.

---

No. 77. In the blank sent to me, you ask for information in regard to mechanics employed in the building trades. In the first place, steady employment in the plastering business, except in some isolated cases, is a thing unknown; for very few employers have work for their men in the winter months and the number of plasterers is too great for the work to be done at any time except in very good seasons. This state of affairs is not due to too many apprentices being taught the business, but because of the foreign workmen in this and other large cities, who seem to be looked upon with great favor by the employers, and who seem to be given work in preference to men born and reared in this country. They seem to be used as a standing menace to organized labor. You may ask what remedies I would propose? I answer that there are several: First, and most important, I would suggest that emigration should be restricted for as I have said before, there are too many men in all the large cities now for the work which is to be had, and I am in favor of American boys being encouraged to learn trades so that after having served a

faithful apprenticeship, they may have the opportunity of earning a livelihood and not be turned adrift to make places for men from foreign countries. It makes a young man wonder if all he reads and hears about this great and glorious country can be true. These are not the sorehead utterances of an anarchist or socialist, but the result of reading and thinking by an American mechanic whose ambition is to better his condition by steady work with fair wages.

---

No. 78. I favor the apprenticeship system, because it makes the best mechanics.

---

No. 80. I favor the apprenticeship system, as I do not know any plasterer who ever went to an industrial or training school.

---

No. 83. I favor the regular apprenticeship system, as the school training has a tendency to cheapen labor.

---

No. 84. I favor the apprenticeship system. Some trades may be acquired in industrial schools but I do not think any of the building trades can.

---

No. 85. I favor an apprenticeship system under a master plasterer. In the industrial schools boys are taught the rudiments of the trade, and in some cases they leave the schools and take the places of journeymen for less wages. The employer is satisfied with his inferior work, because he can get him for a dollar or so per day less than he would have to pay a journeyman.

---

No. 86. I favor the industrial school training, although I have several apprentices learning the plastering trade and I do not think that boys who wish to learn this trade can have all the facilities in a school, yet for some trades I believe the best and most intelligent mechanics can be turned out from them.

---

No. 87. I do not favor an industrial school training for boys who desire to learn this trade, as I believe it does them more harm than good when they commence practical work.

---

No. 88. In this trade each master plasterer is allowed to have two apprentices at the same time. I favor the apprenticeship system. My reasons being that working every day beside skilled mechanics, will give a boy more knowledge than studying the trade for a few hours each day in a school.

---

No. 89. I favor the training in industrial schools for I approve of every American boy who desires to learn a trade having the opportunity and if he is not permitted or given a chance outside, then let him get his training in a school if he can.

---

No. 90. I favor an industrial school training, because in school there is some one to instruct a boy in all branches and details of the trade. In answer to question 17, I would say that tile work, papermache, and iron and steel walls and ceilings do away with plasterers' work to a very great extent in large building operations.

No. 92. The apprenticeship system turns out the best practical workmen.

---

No. 93. I favor a regular apprenticeship system, as the boys have more teachers on buildings and a better opportunity of learning.

---

No. 94. I favor the apprenticeship system. I do not think there are the proper facilities in industrial schools for teaching the plastering trade thoroughly.

---

No. 95. I favor the apprenticeship system, because by serving an apprenticeship under a master who is a practical mechanic the apprentice becomes a finished mechanic himself.

---

No. 96. I would not object to a preliminary training in an industrial school, but I do not see how any boy can become a mechanic unless he actually works on buildings.

---

No. 100. An apprenticeship system is better, as a boy learns more in buildings.

---

No. 101. I favor the apprenticeship system, because a boy has a better opportunity to learn the trade in buildings.

---

No. 102. The apprenticeship system turns out the better workmen.

---

No. 103. I favor the apprenticeship system, as there is a vast difference between one imagining he knows how to do the work, and actually doing it.

---

No. 104. I favor an apprenticeship system of not less than a four years' term, because a boy cannot learn the trade properly in less time than that, and he should be taught at actual work in buildings.

---

No. 105. I am in strongly in favor of the apprenticeship system, and at actual work in buildings; as the apprentice gets practice which cannot be had in schools.

---

No. 106. I favor the apprenticeship system, because I know nothing whatever about industrial or training schools.

---

No. 107. I think it is an even thing between them, as the training is about the same in both systems.

---

## CARPENTERS—PHILADELPHIA.

---

No. 1. I favor the apprenticeship system, as there are too many carpenters in the market now.

---

No. 4. I favor both systems.

No. 5. I favor the apprenticeship system, but do not favor training in industrial schools. My reason is that the apprentice who learns his trade with journeymen makes the best workman. In answer to question 17, I can say that in our trade the introduction of machinery has displaced more workmen than in any other of the building trades. Why, in the mill in which I am employed, the sand-papering machine has taken the place of eight men, and the introduction of machinery has lowered the wages of carpenters greatly. The bricklayers and plasterers command much better wages than carpenters, because machinery cannot be used in their trades.

---

No. 6. I favor the apprenticeship system and a stringent one. A boy should be compelled to serve a full term of apprenticeship with one master, as in that way better mechanics are turned out.

As to the introduction of machinery displacing workmen, it has displaced too many I am sorry to say, and it has been the means of lowering the wages of those that are left, and of overrunning the trade with what are termed "saw and hatchet" carpenters or men who do not know the trade.

---

No. 7. I favor a training in industrial schools, as they turn out a better grade of workmen. There are too many "handy men" or "saw and hatchet" men working at this business now.

---

No. 8. I favor an apprenticeship system, because I was taught as an apprentice and I never worked with a graduate of an industrial or training school. Of course the introduction of machinery has displaced many workmen.

---

No. 11. I favor a training in an industrial school, but if I wanted one of my sons to learn this trade I would prefer the apprenticeship system; as in the schools boys cannot acquire a practical knowledge of carpentry.

---

No. 12. I favor the apprenticeship system, as I believe practice to be superior to theory.

---

No. 13. I believe in the apprenticeship system. Let boys who desire to learn this trade, do as I did, go for a regular term to a master builder who has all kinds of work to do. In schools boys learn only to keep their tools clean, and get no chance at practical work. Of course the introduction of machinery has affected the rate of wages, and the number of workmen as well. In former years all work was done by hand, but now all the fine work such as doors, blinds, sash, shutters, etc., is manufactured in mills ready to put up. Of course I cannot tell what carpenters' wages would be if machinery was not in use.

---

No. 14. I favor the apprenticeship system, as I think that it gives boys a fuller knowledge of the trade.

---

No. 15. I believe in the apprenticeship system, but the apprentice should have a term in a school where drafting is taught to be a competent workman. An apprentice gets the experience without which

he cannot become a good workman. The wood-working machinery is so old now that it is difficult to say how many men it has displaced, of course it must have displaced quite a number, and were it not for machinery, carpenters would have plenty of work all the year round and then the wages could be kept up. As it is, it is easy for employers to get all the men they want at any rate of wages offered. In my opinion the only way in which a workingman's condition could be bettered, is by enacting a law shortening the hours of labor. Then the workingman could have some enjoyment of his life.

---

No. 16. I favor the apprenticeship system and employers should not be permitted to hire any man who had not served a regular apprenticeship.

---

No. 18. I favor the apprenticeship system, as a boy becomes a practical mechanic and knows how to handle his tools. In answer to question 17, would say that about two-thirds of the carpenters in this city are idle by reason of the use of machinery, and it has lowered the wages at least one-third.

---

No. 19. I favor an apprenticeship system with a master who is both theoretical and practical with whom a boy can learn the trade in all its branches. The introduction of machinery has both affected the number of men and the rate of wages. In one of my trades—cabinet making, it has lowered wages forty per cent.

---

No. 21. I favor an apprenticeship system in preference to an industrial school training, as a boy cannot become a practical mechanic unless he serves a regular term at actual work to gain experience and confidence in himself.

---

No. 22. I favor an apprenticeship system, because in this trade there is so much of different kinds of work to do that a boy must get his training at actual work.

---

No. 24. I favor the apprenticeship system; there is too much of theory in the schools.

---

No. 25. I favor the industrial school system, as some employers will have four or five apprentices, and they displace that many journeymen carpenters. The wood-working machinery has of course displaced a great many workmen and has lowered the wages greatly.

---

No. 26. I favor the apprenticeship system, as under it a boy gets better training as far as this trade is concerned. Machinery certainly has displaced a great number of workmen, and also reduced the wages.

---

No. 27. I favor an apprentice system, as the industrial schools seem to bring more hands into an already overburdened trade, and a boy to get this trade properly, should have all the practical experience he can can get.

As to machinery, I am in favor of it, as it makes labor easier, and seems to me to be more in the way of advancement. I am in favor of an eight hour working day, and am strongly opposed to the piece work system, as it cheapens labor, lengthens working hours, brings incompetent men into the trade, and is the cause of a great deal of "botch" work. A good mechanic who works by the piece, soon becomes careless, as his sole object is to make as much as possible; and then he is frequently not able to compete with a rough workman who is fast. And if he does succeed in making good wages on one job, on the next he is cut down, for no matter at what price a man will do a piece of work, there will always be some one found who will be willing to do it for less.

---

No. 28. I favor both systems. The school training helps a boy by giving him instruction in the architectural branches of the trade and the apprenticeship finishes him into a good mechanic.

The question as to the introduction of machinery displacing workmen seems to be superfluous. Of course it has displaced them as otherwise it would not be used, and it does affect the rate of wages in this business as witness the difference between carpenters wages and those of bricklayers, stone-masons, stone-cutters, plumbers, etc. Why, bricklayers are paid $4.05 per day and carpenters $2.70. So you can see what difference machinery makes.

---

No. 29. I think both systems are good; the first for the educational facilities, the second for practice.

---

No. 30. An apprenticeship system is better, as a boy can learn more outside than in a school.

---

No. 32. I favor the apprenticeship system, as a boy under it gets a better insight as to the work he will be called upon to do later on.

---

No. 33. I think that a boy who serves a regular apprenticeship is better qualified to grapple with the various kinds of work he will have to do.

---

No. 35. I favor both systems, as I think that after a carpenter gets his trade and commences as a journeyman, he should be competent to lay out work for himself and not be dependent upon others. Of course, a boy who goes to a school for a year or two, I mean an industrial school, gets a knowledge of plans and architectural drawings, which he could not get from a master except in very rare cases. Of course, the introduction of machinery has displaced workmen, for if all the work was done by hand as it was fifty years ago, with the enormous number of buildings that have been erected, they could not turn out carpenters fast enough to do the work. The men to be considered carpenters would have to be skilled mechanics not "saw and hatchet" men, for when a man could make a fine door, shutter, or sash at his bench he would be master of his trade and need not fear that his job would be taken from him by a "botcher."

No. 36. I favor a regular apprenticeship system, as I don't see any benefit that would be derived from teaching trades to boys in schools. My reasons are, that the business is ruined by such methods. As to question 17, I would answer that no man can approximate how many men the introduction of machinery has displaced. Of course it affects wages, as it enables ignorant, unskilled workmen to take the places of regular trained carpenters, and a superabundance of men means a reduction of wages. Witness what wages bricklayers and plasters get because machinery cannot be used at their work.

---

No. 37. I favor a regular apprenticeship, as boys who are taught in training or industrial schools are inclined to look down upon boys who serve their apprenticeship in the regular way, and if placed in authority over them, they are apt to be overbearing and are not qualified to determine when a fair day's work has been performed.

---

No. 38. I prefer the apprenticeship system. No trade or industrial school training for me. Experience teaches better than school theories. As to the introduction of machinery, it has simply ruined this business and has been the means of lowering the wages of those who work at it.

---

No. 39. I favor an apprenticeship system, and employers should be limited to the number of apprentices they take. Machinery has displaced workmen; that is what it is introduced for. But the influx of foreigners who are willing to work for any wages offered has injured this trade more than machinery has.

---

No. 41. I favor an apprenticeship system, as by actual work boys get a good practical knowledge of the trade which it would be impossible to give them in the schools. Theoretical knowledge only is obtained in them.

---

No. 43. I do not favor the industrial school training, because in such schools they simply get the theoretical part, and as of course their instructor is disposed to think that his plans and ideas are correct, why naturally the boy thinks so as well. I was at one time foreman for a large builder, and had a boy under me who had graduated from an industrial school, and he knew a great deal more than I did, the very first day he commenced, that is to say, he imagined he did, and when I would direct him to do a piece of work in a certain way, he would tell me that that was not the way he was taught in school to do it, and we had to get rid of him.

---

No. 45. I am certainly in favor of an apprenticeship system at actual work, as I believe it to be the only correct way to learn a trade.

I do not think that the introduction of machinery has resulted in displacing workmen or in lowering wages, as wages are regulated by the law of supply and demand.

---

No. 46. I favor an apprenticeship system, as it is the only way by which this trade can be learned properly. If it were not for the

piece-work system, and machinery, carpenters would get as much pay as bricklayers. We get a great deal less wages and are obliged to find our tools, which number more and are more expensive than those of all other workmen in building trades combined. Machinery does displace workmen for as a boy I worked in a factory where wall-paper printing was done, and one machine could do as much work in a day as twenty-five men.

---

No. 47. I favor the regular apprenticeship system, as under it boys get the practical experience which they cannot get in the schools.

---

No. 49. I favor the apprenticeship system. I served an apprenticeship of four years and nine months and learned the trade thoroughly and that is what a boy could never do in a school. Machinery affects this trade I suppose to a greater extent than any other, as all work was formerly done by hand and now putting it up in the buildings is about all that is done without the aid of machinery.

---

No. 51. Machinery has displaced workmen, as by the use of it, one man is enabled to do the work of ten. Carpenter work as it is done to-day, is far inferior to the old fashioned hand work.

---

No. 52. I favor the apprenticeship system, as boys who are regularly bound and serve their time with a good practical builder make the best mechanics.

---

No. 53. I favor first a course of training in industrial schools followed by a regular apprenticeship with a good master. Machinery has displaced workmen and always does. To what extent in this business I cannot say, as the subject is too vast for me to wrestle with.

---

No. 54. A regular apprenticeship must be served by a boy if he wants to be a good mechanic, as a theoretical or scientific carpenter is no good as in these days of "rush;" speed is desired more than theory.

I do not believe that the introduction of machinery has injured us to any great extent, and wages are regulated according to the needs of the trade.

---

No. 55. The regular apprentice gets the more practical knowledge. As to machinery I cannot answer, as I have never worked in a shop where is was used.

---

No. 56. I favor both of the systems, and in order that boys should be properly instructed I would favor a free training school for boys who are unable to pay.

---

No. 57. I favor the apprenticeship system, as a boy cannot get the knowldege at a school that he can on a building.

---

No. 58. I favor both systems; the school first and then the regular

apprenticeship, for a boy cannot be a good workman unless he works at the trade with journeymen.

---

No. 59. I favor the apprenticeship system, as it gives the boy a chance at all the different kinds of work.

---

No. 60. The apprenticeship system is best for the training of practical mechanics. I should say that the introduction of machinery has displaced at least one-half of the workmen who would be needed at this business; and has tended to reduce wages probably 20 per cent.

---

No. 61. I favor both systems, as I attended the Master Builders' Trade School for nine months, then served as an apprentice with a master builder for two years; now I am in business for myself.

---

No. 62. I favor both systems. But if we had an apprenticeship system in this business such as the bricklayers in Philadelphia have, it would be a great improvement, and a benefit to both the master and apprentice, as the boy could not leave his employer without cause, and get work as a journeyman elsewhere. As to the introduction of machinery, I would say that the use of wood-working machinery has gotten to be an old story now. Of course it has reduced the number of workmen, for if there was no machinery there would be work for every one and wages would be higher. But then to offset that, there would not be so much building going on, which would be about as bad. The use of machinery has tended to lower wages at least ten per cent., I would say.

---

No. 63. I favor the apprenticeship system, as having his work constantly before him better qualifies a boy for the trade.

As to what effect the introduction of machinery has had on the number of workmen or the rate of wages I cannot answer intelligently, as I have never given the subject any consideration.

---

No. 64. I favor the industrial school training, because it is the most expeditions system of gaining knowledge of this or any trade which is taught in them.

---

No. 66. I favor both systems. Apprentices do not get the attention that is due them from their masters in the matter of plans, drafting, etc., so there should be free training schools for them. The use of machinery certainly has reduced the number of men who wihout it could find constant employment at this business, and it has also tended to lower the wages at least 20 per cent.

---

No. 67. I cannot say, as I have never worked with any pupils from an industrial school nor have I ever seen any work that was done by them. The machinery of course has displaced workmen; that is what machinery is for.

---

No. 68. I favor the industrial school training, as I attended one, and afterwards served two years as an apprentice. I think the

school training the most expeditious plan for a boy to get the knowledge of the trade.

---

No. 69. I favor the apprenticeship system, as we have too many theoretical and too few practical carpenters now.

---

No. 70. I believe in the apprenticeship system. My reasons are, that although a boy from school may be skilled in the use of tools, he does not get the practical knowledge which is acquired by a boy who serves a regular apprenticeship at the trade.

---

No. 75. I favor the apprenticeship system, as experience is half the battle. Boys in training schools do what work they have in a warm comfortable place but they find a difference when they work out in the weather. Machinery has tended to reduce wages, but in what proportion, I canot say.

---

No. 77. I favor apprenticeship system, as boys in schools do not get the experience which they do on large buildings.

---

No. 78. I favor both systems. The schools for the theoretical and the regular apprenticeship system for the practical parts of the trade.

---

No. 79. I favor the apprenticeship system. When working in a shop or on a building, a boy has the benefit of different men's ideas. In a school there is only one man to learn from, and it is difficult to find two men who work alike.

---

No. 80. I favor an apprenticeship system, but there is not much use in boys learning trades when so many are coming from the other side who have learned the trade before they come.

---

No. 81. I favor the regular apprenticeship system, because under it a boy is practically taught and he has to take the rough work with the smooth. Boys from the industrial or training schools leave the trade when they come to the hard and heavy work of carpentry. Of course there are exceptions.

---

No. 82. I have not had the opportunity of seeing the results of an industrial school training, so cannot venture an opinion.

---

No. 83. The training schools are well enough, but the employers are using them as a menace to the journeymen, rather than as a benefit to the boys.

---

No. 84. I favor the regular apprenticeship system, as by it, were it carried on properly, we would get better workmen, which would have a tendency to do away with piece-work.

---

No. 85. I do not favor either system; as boys except in isolated cases simply have to pick up a knowledge of the trade themselves, for no one has time or inclination to instruct them. An answer to question 17, would be merely guess work and of no value.

No. 86. I am in favor of apprentices, as I find that they are better workmen; at least that has been my experience.

No. 87. There are not many apprentices employed at this trade now, as the "hatchet and saw" men take their places and get as much wages as if they had served a regular apprenticeship. But if anything, I favor the former, for as an apprentice he learns at least the practical part of the trade.

## HOUSE PAINTERS—PHILADELPHIA.

No. 1. I think the apprenticeship system is better, as boys learn more and get a better idea of how the work is done.

No. 2. I favor the apprenticeship system, as a boy has more chance to learn the trade practically.

No. 5. I prefer the apprenticeship system. My reason being that in the school a boy can only be grounded in the fundamental part of the business. But there are too many painters now, and the trade is overcrowded.

No. 6. I favor the apprenticeship system, a boy wants the practice as well as the teaching that he gets in the school from a book-learned teacher.

No. 7. I prefer the apprenticeship system, provided the boys are taught and not permitted to pick up the trade themselves. A training in a school is not a practical training.

No. 8. I favor an apprenticeship system, as it would be the means of getting the trade united and I would like to see a better class of house painters and better wages; at least three dollars for a nine hour day.

No. 10. I favor an apprenticeship system, and my reason is, that there is not enough work now for men who have already served their time.

No. 13. I favor an apprenticeship system, as a boy will learn more from a practical workman in a month than he will from a teacher in a year.

No. 14. I favor an industrial school training.

No. 16. A practical apprenticeship in a shop is best, and the proof is that no boy who has only had an industrial school training, is competent to take a job as a journeyman.

No. 17. I favor an apprenticeship system, for if a boy attended school for ten years it would not teach him to work on a swinging stage or jack.

---

No. 18. I favor a training in an industrial school, as under the apprenticeship system boys in large shops learn only part of the trade.

---

No. 20. I favor the apprenticeship system, as a young man can get better experience by actually working at the business than he can get in a school.

---

No. 21. I favor the regular apprenticeship system, because the variety of work must be greater outside than in a school.

---

No. 22. Training in industrial schools is a farce, as boys from them never turn out to be good mechanics.

---

No. 23. I favor the apprenticeship system, with an early training in an industrial school. They will make the best workmen.

---

No. 24. I do favor a rigid apprenticeship system, and I assert that the abandoning of it has been the ruination of this trade. A trade can be acquired better by a boy when he is taught by practical mechanics, and at a variety of work.

---

No. 25. I favor the apprenticeship system, as a boy gets more practical training on all kinds of work, which of course cannot be taught in schools.

---

No. 28. I favor an apprenticeship system, because apprentices get a more practical training, and what is of great importance to poor boys, they are paid wages while they are learning the trade.

---

No. 32. I favor the industrial school training, because a boy who is apprenticed, and shows an aptitude for a particular part or branch of this trade, is usually kept at that and learns nothing else.

---

No. 34. I favor a good apprenticeship system. I have worked with several painters who were taught in industrial schools, and there was not a good practical painter among them, for in the schools they cannot be taught the stern realities of the trade, as they do not work out in the weather. But why more painters? There are a great many more now than can find steady employment in this city, and the hours of labor must be reduced before there will be more apprentices or painters actually needed. In answer to question 17, as to the use of machinery displacing workmen, I would say that in former times paints were ground and mixed by hand, each master painter doing his own work. Now they are ground and mixed in the large paint factories, and sold ready to put on, which of course reduces the number of workmen necessary. As to whether it has had any effect upon the wages I am not able to determine.

No. 36. I favor the apprenticeship system, but I hope there will be nothing done in the way of holding out inducements to boys to learn this trade, as there is not enough work for half of the journeymen in this business now. Machinery for grinding paint has displaced at least half the number of workmen needed.

---

No. 37. I favor an apprenticeship system, because if a boy has any aptitude for the trade he can learn more by working with old hands.

---

No. 38. I favor an apprenticeship system, because there is as much difference between working in a school and actually working at the trade outside, as there is between day and night.

---

No. 40. I favor an apprenticeship system, and a boy being instructed by competent and practical journeymen.

---

No. 41. I favor an apprenticeship system, as practical experience is what is needed to make a first-class workman.

---

No. 42. I favor a training in industrial schools, as they learn more about the properties of colors and how to mix them than they would in shops.

---

No. 44. I favor a school training, that is to say a preliminary training, as it teaches a boy how to use his tools and prevents a great waste of material. Boys when first apprenticed to this trade waste a great quantity of paint.

---

No. 45. I most undoubtedly favor an apprenticeship system, as there is too much of theory taught in industrial schools, when practical knowledge is the thing needed.

---

No. 46. I think the apprenticeship system is better if rigidly enforced.

---

No. 47. I favor an apprenticeship system with proper regulations as in schools they cannot have the facilities for teaching this trade properly.

---

No. 48. I favor an apprenticeship system, and I would also earnestly favor a system by which no man would be allowed to work at this trade unless he had served a full term of apprenticeship. Such a system would be the best for mechanics.

---

No. 49. I favor an apprenticeship system, as boys have more experience at different kinds of work than they can have in an industrial school.

---

## METAL ROOFERS—PHILADELPHIA.

---

No. 3. I favor an industrial school training, but I do not think it would be practicable to train or instruct boys in this business at a school.

No. 4. I favor an industrial school, as a theoretical knowledge of any trade is always beneficial.

---

No. 5. I favor the industrial school training if it can be afforded, because a boy gets a better knowledge of the technical part of his trade, and he can learn the practical parts by working at it. As to the introduction of machinery displacing workmen, would answer that it has in this trade to some extend, as one man with the aid of a machine can put together as much roofing tin as four men formerly could by hand.

---

No. 6. I favor the apprenticeship system, but will say that I have no knowledge of the school training nor have I ever worked with one who was taught in them.

---

No. 7. I favor the apprenticeship system, as a boy gets a better experience and more new ideas.

---

No. 10. I favor an apprenticeship system, as a boy who learns his trade in a shop makes the better mechanic, and I speak from an experience of forty years at this trade. I should say that the use of machinery in this trade has displaced about twenty per cent. of workmen, but I cannot say whether or not it has affected the rate of wages.

---

No. 11. I do not favor book taught mechanics; actual practical work makes the best workmen every time.

---

No. 12. I favor apprenticeships of course, because a boy cannot learn this business in a school, as the work is all outside and of a very great variety. As to machinery displacing workmen it has to a great extent, as formerly if the weather was too bad to work outside, the men could work in the shop at putting tin together. Now the employers can get it put together by machinery cheaper than to pay men three dollars a day to do it.

---

No. 13. I favor an apprenticeship system, as boys from the schools cannot do this work.

---

No. 15. I am in favor of a regular and rigid apprenticeship system. This trade cannot be taught properly in any school.

---

No. 21. A training in an industrial school is all right, but a regular apprenticeship is better, and if a boy can get both, it is best of all; but it is absurd to imagine that a school training alone will make a boy master of this trade.

---

No. 23. I favor an apprenticeship system, as a boy under it must take more interest in his work than he would in an industrial school.

---

No. 24. I favor the apprenticeship system. My reasons being that a boy will learn more in a shop or at out door work than he could in a school, as he sees the way the work should be done.

No. 30. I favor a combination of the industrial school training and apprenticeship system, as the boy can get both theoretical and practical instruction.

---

No. 32. I favor an industrial school training, as a boy will learn all the branches of this trade.

---

No. 37. A boy can see and learn more by being apprenticed with a practical man than he could be taught in school.

---

No. 38. I favor an industrial school training, as it enlightens boys and perhaps after a while they will take the places of foreign workmen who are willing to work for whatever the employers feel like giving them. As to the use of machinery, of course it has revolutionized the manufacture of tin-ware, and by the use of it, tin for roofing purposes can be put together by one man and he can do as much in a day as three or four men formerly could by hand.

---

No. 39. I favor some system that would quarantee a supply of good mechanics. It seems to me that this business is crowded with men who have not served more than six months at the business and one man who is thoroughly skilled, is made to work with about six of these "handy-men" as they are termed.

Machinery has taken the place of a great many workmen, particularly in the manufacture of tin-ware, and of a number at the roofing branch of the trade. I do not say that it has affected the rate of wages but it has rendered fewer men necessary.

---

No. 40. I favor the apprenticeship system, as the tin-roofing trade could not be taught in a school, as the jobs are short and no two exactly alike.

---

No. 41. I favor an apprenticeship, for under it a boy has a better opportunity to learn, as he gets different ideas from different men. The average yearly time made by journeymen in this business is from seven to eight months in the year, as we have to lose all wet or stormy weather. The wages range from $2.25 to $3.25 per day.

---

No. 42. I favor the apprenticeship system. The training schools give only the ideas, but by apprenticeship the boy gets the practical knowledge.

---

No. 43. The apprenticeship system would in most cases be preferable, as by it a boy gets to have more confidence in himself.

---

No. 44. I favor an apprenticeship system, at this trade at least, as there are so many different kinds of work to be done at it, that it could never be taught properly in schools.

---

No. 45. I favor the apprenticeship system, as the industrial schools turn out too many workmen, by means of which the market is overstocked.

No. 48. I favor both system, as under them a boy gets both mental and manual training. The use of machinery at this business has displaced to my knowledge at least 30 per cent. of workmen.

---

No. 49. A boy cannot be taught to put tin on the roof or side of a building in a school; therefore I favor the apprenticeship system.

---

No. 50. I favor an apprenticeship system at this trade, because it is work that must be done in a hurry and a practical man can do it more successfully than a theorist.

---

No. 51. I am in favor of an apprenticeship system, for I do not see how this trade can be taught in schools.

---

No. 52. I favor an apprenticeship in a shop where the number can be regulated according to the number of journeymen employed.

---

No. 53. I would favor a training in an industrial school until the boy is seventeen or eighteen years of age; then he should be apprenticed to the trade regularly.

---

No. 54. I favor an apprenticeship system, as in that way a more practical knowledge of the trade is gained.

---

No. 55. I favor the apprenticeship system, as a boy learns to work to the best advantage to save material.

---

No. 56. I favor the apprenticeship system, as in this business there are no two jobs alike, and boys only could get an idea of it in the training schools.

---

No. 59. I favor a training in an industrial school, as I think a boy will be turned out a more practical mechanic.

---

No. 60. I do not favor the industrial school training for boys at building trades, or at any out-door trades, as boys who learn in them, cannot stand the extremes of heat and cold like a boy who has served a regular apprenticeship. And the training school graduate will soon get tired and leave the trade. Machinery has displaced workmen, as by the use of it, boys are enabled to do the work formerly done by men, and it has affected the rate of wages for the above reason.

---

No. 61. As I have no knowledge of an industrial school training, nor have ever worked with anyone who was taught in them; I therefore favor the apprenticeship system, and every boy who wishes to learn a trade should be compelled to serve a regular apprenticeship to it.

---

No. 64. I favor both systems, as both have merit. The making of continuous tin by machinery has injured this trade by reducing the number of workmen required.

## BRICKLAYERS—PITTSBURG.

No. 2. I favor the apprenticeship system, because of the more practical training which a boy receives, because he is greatly benefited by studying the various methods of working of the workmen with whom he comes in contact.

No. 4. I favor the apprenticeship system, because from the knowledge I have of industrial schools, they are a failure with respect to instructing boys in bricklaying.

No. 5. I favor the apprenticeship system, as boys from the training schools are slow, and lack the practical knowledge which experience gives.

No. 6. I favor the apprenticeship system, because under it, a boy becomes a better mechanic by learning from the journeymen with whom he works as well as from the boss.

No. 8. I favor the apprenticeship system, because the industrial schools cannot give a boy the practical knowledge of his trade which he should have.

No. 10. I favor an apprenticeship system, because I think a boy gets more knowledge when he works with journeymen of his own craft.

No. 11. I think an apprenticeship system is more beneficial to both apprentices and journeymen.

No. 12. The apprenticeship system is the better and most beneficial to the boy who wishes to learn this trade.

No. 13. I favor the apprenticeship system, as there is a lack of general knowledge in graduates from the training schools.

No. 14. I am in favor of the apprenticeship system, as the knowledge the boy gets makes him a more valuable workman.

No. 15. I favor the apprenticeship system, as the rules of the "union" compel them to serve three years.

No. 16. I favor the apprenticeship system, as the graduates from industrial schools lack practical knowledge.

No. 19. I do not favor the industrial school training, as boys cannot gain the practical knowledge that is necessary in them.

No. 25. I favor the apprenticeship system, because when turned out by the schools, boys lack practical experience.

## CARPENTERS—PITTSBURG.

No. 2. I do not favor any system which tends to make paupers. An apprentice in the building trades very seldom rises to any height in the social scale. Give the land to the people, and let them till it and that will end all strikes and poor-taxes; for until land sharks and theives are done away with, and until the people are given back the great gift that the God of Heaven gave them, there will never be amity between capital and labor, and there always will be poverty.

No. 6. I favor an apprenticeship, as it makes better mechanics of boys who are willing to be taught.

The introduction of machinery has to a certain extent made a large number of men idle.

No. 7. I favor an apprenticeship system, as a boy who wishes to learn this trade should be apprenticed to a good practical man as he will learn more and have opportunities of working on more different kinds of work.

No. 8. An apprenticeship system is preferable, because the instruction is too limited in the industrial schools to give a boy a thorough knowledge of the various branches of this trade.

No. 11. I do not favor the industrial schools, as boys whose parents are poor cannot afford to go to them; at least such has been my experience with them in Pittsburg; therefore I favor the apprenticeship system.

No. 14. I favor an apprenticeship system, because a boy is more thoroughly taught and gets a chance to learn at various kinds of work.

No. 15. I favor an industrial school training, as it adds to the efficiency of a mechanic by making him more independent of others, and better calculated to get ahead.

No. 19. I prefer an industrial school training. My reason is because time is too valuable for a journeyman to teach an apprentice.

## CARPENTERS—BEAVER COUNTY.

No. 1. I favor an apprenticeship system. My reasons are that apprentices are better suited to general work.

No. 2. I favor an apprenticeship system, as a boy who desires to learn this trade should get right down to work and learn it.

No. 5. I favor the apprenticeship system, as under it we would have a better class of mechanics with less detriment to the trade.

---

No. 6. I favor the apprenticeship system. My reason being, that after his time expires he will be a better mechanic by having been taught his trade in buildings.

---

No. 10. I favor the apprenticeship system, because boys learn faster and make better mechanics.

---

No. 11. I don't know anything about training or industrial schools, but I am compelled to say that the apprenticeship system is not perfect by any means, nor does it aim at perfection. A builder takes a strong young man who wishes to be a carpenter, and keeps him at the branch of the business that he seems best adapted to, and takes no further care of his interests or advancement and if the boy is not intelligent and apt in picking up the trade himself, he is not likely to know much about it when his time expires.

---

No. 12. I favor the apprenticeship system, as I think that practical knowledge is better than theoretical.

---

No. 13. I favor the industrial school training for as far as my judgment goes, and from what I have seen, it is best. My reasons are, that the employer generally keeps the apprentice employed at driving wagon, doing errands, digging post-holes, tending bricklayers, and making a general roust about of him, and depriving him of the practical knowledge of the trade which he should be getting in the limited time of his apprenticeship.

I do not think that the introduction of machinery has affected the rate of wages, as in 1855 journeymen carpenters wages ranged from $1.00 to $1.50 per day. About 1868, they were from $2.00 to $3.00 per day. Since the later period, the wages have varied from $2.00 to $2.75 per day. The average in the large cities has been from $2.50 to $2.75, and in small towns from $2.00 to $2.25 per day.

---

No. 15. No, I do not favor a school training. My reason is that a boy cannot learn a trade thoroughly without working at it.

---

No. 20. I favor an industrial school training under certain conditions. A boy should go to the school first, and then serve a term of apprenticeship. I am of the opinion that the introduction of machinery has displaced the number of workmen at least 20 per cent. I believe the time has come when we should be obliged to work only eight hours per day and there should be an act of the legislature fixing that time, as by that means more men would be employed and the necessity for strikes would be done away with.

---

No. 25. I favor an apprenticeship system. My reasons being that no boy can learn a trade thoroughly without working at it.

---

No. 26. I favor an apprenticeship system, as the school training is not practical.

## CARPENTERS—VENANGO COUNTY.

---

No. 4. I favor an industrial school training. My reasons are that when they are afterwards apprenticed they get the same wages as the older apprentices.

---

No. 5. I favor an industrial school training, because when boys graduate from them they would not be so likely to commence journeywork for $1.50 to $1.75 per day.

---

No. 6. I favor an apprenticeship system; my reason is that better results are produced from it.

---

No. 7. I favor the apprenticeship system, as in my opinion practical experience goes ahead of theory. In answer to question 18, I would say, that the introduction of machinery has affected the wage rate as it enables employers to work men with less experience and of course at reduced wages.

---

No. 9. I do not think it is worth while to discuss the subject of apprenticeship as there is no encouragement for a boy to learn this trade. A carpenter must provide himself with a chest of tools at a cost of from 100 to 150 dollars, and then he is obliged to work for about a laborer's wages, and then he does not find work for more than half the time at that. I think there will be a scarcity of skilled mechanics in this country in a few years. The introduction of machinery has both affected the number of men employed and the rate of wages as there is scarcely any shop-work now.

---

No. 10. I favor the apprenticeship system, as I do not think a boy can be a No. 1 carpenter without practice in the use of tools.

I think that if there was no machinery in use there would be more work and better wages.

---

No. 13. I favor the apprenticeship system, as the boy is with the employer or journeymen and gets the ideas and practical parts of the trade at actual hard solid work. The number of workmen at each shop or mill has been greatly reduced by the use of machinery, and the rate of wages has been reduced at least twenty-five cents per day from the same cause.

---

No. 16. I am in favor of an apprenticeship system, as the boy works along with actual workmen and learns to use the tools more rapidly.

---

No. 18. I do not know anything about industrial schools, but am heartily in favor of some system of training for apprentices which will make better workmen of them.

---

No. 19. I favor an apprenticeship system, as I think a boy makes a better mechanic after he serves an apprenticeship.

No. 20. I favor an apprenticeship system as being away ahead of industrial school training.

---

## CARPENTERS—WESTMORELAND COUNTY.

No. 1. I know all about the apprenticeship system, but know nothing about industrial schools as I never worked with any boys from them.

As to the use of machinery I do not see how we could do without it now.

No. 2. I favor the apprenticeship system, because it takes practice to make a competent mechanic.

No. 4. I favor the apprenticeship system, as in a training or industrial school boys cannot get a practical training in the method of constructing houses.

No. 7. I favor an apprenticeship, as a school training is simply theoretical and does not give boys real practice in the construction of buildings.

No. 15. I favor both systems. Industrial schools give boys theoretical educations and instruct them in the reading and use of plans and architectural drawings which knowledge is of great use to them during their future experience as apprentices and journeymen.

No. 17. The apprenticeship system is better, as the boy does his work under the eyes of his employer and of the journeymen and besides he gets the opportunities of working at all branches of the business and the practical knowledge of all parts of a building from foundation to finish.

It is somewhat difficult to answer your questions satisfactorily. My experience of forty years at this business forces me to state that notwithstanding the great improvement in wood-working machinery, there is not as good honest work done on buildings as there was forty years ago when the work was made by hand. The mills where nearly everything connected with a building is made by machinery are conducted by men whose sole desire is to make money, without any regard to the character of the work they turn out. The use of machinery has a tendency to lower wages.

No. 18. I favor an industrial school training. My reasons are that as there are no restrictions placed on apprectices, there is nothing to prevent them, after they have served a year or so, from leaving their masters and going to work as journeymen elsewhere.

No. 21. I favor the industrial school training, as I am of the opinion that apprentices can be better instructed in the trade in them.

No. 22. In regard to the apprenticeship system, much depends on the master. In my experience very little attention is given to boys in teaching them the practical parts of the trade, as they are usually kept at the rough laboring work, such as carrying material, lumber, etc.

---

## CARPENTERS—MERCER COUNTY.

No. 1. I favor the apprenticeship system, and that the boy should be regularly indentured to remain with his master until he should reach his majority; and that the master should also be bound to teach the boy the trade thoroughly. This would result in better mechanics being found at this trade.

No. 6. I favor the training or industrial school system, as the other system turns out too many cheap men.

No. 7. An industrial school training is what I favor. An apprentice does not receive the care that he should nowadays, as he is kept only on such work as he can earn the most money at for his master. When the boy feels that he can do a man's work, he can leave his master if he so desires, and although not half instructed, can get work elsewhere as a journeyman. The introduction of machinery has displaced workmen in getting out building material and so doing away with the skilled labor which otherwise would be required to get it out by hand. It has also affected the rate of wages by enabling contractors to put apprentices in mechanics' places.

No. 9. I favor the apprenticeship system, as a boy receives a more practical training than he can get at a training school. The use of machinery has reduced the number of men required at least one-third and while it has not absolutely reduced wages it has caused a reduction in the time that men are employed as in former times when the weather was too cold or stormy to work outside, journeymen carpenters would be employed in the shops in getting out material. There is none of that now, as the mills get out all the work.

No. 11. I favor training in industrial schools, as I think it is better for the trade.

No. 13. I favor an apprenticeship system, as it makes boys better mechanics.

No. 18. I favor an apprenticeship system, because boys are under our own instructions and are kept at home.

No. 19. I favor apprenticeship, as the boy has a chance to become familiar with the actual work to be done.

No. 20. A regular apprenticeship is what I favor in this trade, because a boy will get a chance to work at all branches of the carpenters' trade.

Of course machinery has displaced workmen, with some of the machines one man can do as much work as ten could by hand. It has also had a tendency to lower wages.

---

No. 21. I favor a limited apprenticeship system, so that men having sons at the trade are enabled to look after them.

---

No. 23. I favor a strict apprenticeship system. My reason is that there are too many "half mechanics" now, and they have a tendency to reduce wages.

---

No. 24. I favor the apprenticeship system as practice is better than theory in this trade.

---

No. 29. I favor the industrial school training as far as possible. My reason is, that by a preliminary course in a school there will not be so many inferior workmen in the labor market.

---

No. 33. I favor the industrial school training, because now the employers hire all the cheap men they can get and expect a competent hand to work beside them at the same wages.

---

## PLUMBERS—ERIE COUNTY.

---

No. 1. The apprenticeship system is better at least for this business, as it gives a boy a thoroughly practical training in all kinds of work which he could not get in a school.

---

No. 2. I do not favor training in industrial school, as there are too many so called plumbers turned out from them now.

---

No. 3. I favor the apprenticeship system, because a full period of apprenticeship is not served in the schools.

---

No. 4. I favor a regular apprenticeship system as the industrial schools are detrimental to our trade.

---

No. 5. I favor the apprenticeship system, as boys from the schools are very injurious to this trade.

Machinery has displaced workmen or at least it has lessened the amount of work, as before the advent of machinery in this business plumbers could work in the shops in winter getting work ready; now there is no work in winter.

---

No. 6. I favor either system, or a combination of both would be better. Every young man who desires to should learn a trade.

No. 10. I do not favor the industrial school training, as plumbers are becoming too numerous by reason of the number of boys who are turned out from these schools.

---

No. 11. There does not seem to be any regularly organized apprenticeship system for plumbers; but I do not favor the training school idea as it increases the number of plumbers beyond the needs of the trade.

---

No. 14. I favor an apprenticeship system, as this trade requires practical knowledge.

---

No. 16. I favor an apprenticeship system, as in most cases boys cannot afford to attend school.

---

No. 20. I favor an apprenticeship in a shop but not in a school. There are too many plumbers who are out of work now without turning out more.

---

## CARPENTERS—BLAIR COUNTY.

---

No. 1. From actual experience in the past as a foreman and superintendent of building operations and carpenter work of various kinds I find that those men who have served regular apprentice terms under good careful masters have a more thorough knowledge of the trade than those who have not. I do not think that the introduction of machinery has affected the rate of wage and what is lost by its use in one way, is gained in another.

---

No. 5. I do not think a boy can learn this trade properly and thoroughly, without serving an apprenticeship of at least three years. By attending a school he may gain a knowledge of one part of it very well. We have too many of that class of workmen now. Most certainly the introduction of machinery has displaced at least 25 per cent. of workmen at this business, but I do not believe it has affected the rate of wages any.

---

No. 6. I favor the apprenticeship system. A boy may learn the minor technicalities of the trade in an industrial school. I think they commence at the wrong end, as in my opinion a term at an industrial school would be beneficial after a boy had served his apprenticeship. The use of machinery has injured trade in this respect. A plaining mill operator will take a contract for furnishing the finished work for a building and he, and not the carpenter who puts it up in the building, makes the profit. The mill man has the profit on the rough lumber.

---

No. 8. I favor a stringent apprenticeship system. If we had that,

the trade would not be injured by so many so called mechanics who can do no more than saw a board square or perhaps hardly that.

---

No. 9. I favor both systems. If a boy's parents can afford it he would be all the better for a year or two at an industrial school, then a regular apprenticeship term to learn that parctical part.

---

No. 14. Both systems are good, and schools should be encouraged; but if a boy's parents cannot afford to send him to an industrial school, I prefer the apprenticeship system, as to be a good mechanic, a boy must have actual practice in handling tools, otherwise he never will be any other than a cheap workman.

I wish to make a statement in regard to the curse of building trades in this section, I refer to the store-order system. If a man applies for work and the employer wants help, he will hire the man if he will take store-orders, and poverty compels many workmen to work under this system. The man takes the order to the store, say for ten dollars and gets about as much goods as he could for seven dollars in cash, and the man who furnishes the order, pays the store keeper every thirty days and gets a large percentage or drawback. Again, a man may be doing a large business in building and hires men promising to pay them weekly, but he will have fifty excuses for not paying cash, but he can give an order on a store for anything the workman may need. Employers should be compelled to pay their hands every week in cash.

---

No. 15. I favor an apprenticeship system for this reason. A poor man who earns perhaps one dollar per day cannot afford to send his son to school, and he wishes to have his son apprenticed so that he can live at home and help support his parents.

As to machinery I would say that there would be work for perhaps two-thirds more men if there were none in use, and because of its use in this trade it is hard to find a skilled carpenter who can do every kind of hand-work.

---

No. 16. I favor apprenticeship, as in my experience I find that regular apprentices turn out to be the best workmen. I have traveled over the United States for the past nine years and before 1894 I had no trouble in finding employment.

This trade is ruined by botchers, as it seems that if a man fails in any other business he gets himself a saw and hatchet and gets employment as a carpenter. I have known contractors have ten or twelve hands employed, and not more than two or three of them had ever served a day's apprenticeship to the trade. This has been the means of getting our trade into the deplorable condition in which it now is.

---

No. 17. I favor the apprenticeship system if strictly carried out. The greatest trouble in the building trades in this section, is to get the money after it is earned; as the employers wish to pay in store-orders which obliges us to pay two prices for our goods. And again, a great many of the contractors do not own any property, and if they are dishonest we are likely to lose the greater part of our wages. The mechanics' lien law as it is called, seems to be all in

favor of the contractor and the parties who furnish the material; they get the money and the mechanic gets nothing but promises.

---

No. 18. I certainly favor the apprenticeship system. In the sash mill where I am employed, boys are running machinery for one dollar per day. In 1890 mechanics were paid $2.25 to $2.50 for the same work.

The store-order system should be abolished by law, as since 1890 I have not received a full month's pay in money, but was obliged to take store orders or I could not have gotten work. I know there are four store-keepers in Altoona who have gotten rich by this system.

---

No. 19. I do favor the training schools or any system that will turn out good mechanics. I served a regular apprenticeship or four years and I think a boy to make a good workman should have a good education.

---

No. 20. I most earnestly favor the re-establishment of the old apprenticeship system, as it was the most thorough and practical. Theory is well enough but it don't always work when applied to wood, bricks, iron, etc.

As you say in the circular which accompanies this blank, that the object of the inquiry is to promote the welfare of workingmen. I heartily approve of it and would respectfully suggest how it may be accomplished in a measure. I would suggest the enactment of such laws as will give them greater protection, for instance a lien law which cannot be declared unconstitutional upon flimsy technicalities by any judge who may see proper to do it. As to the semi-monthly pay law it is almost entirely ignored about here. True any man may try to enforce it, but if he does, he is sure to lose his employment, and I would suggest that the proper law officers of the counties should see to its enforcement.

As to the use of machinery, I can truthfully say that it has displaced workmen and reduced wages; as when it was first introduced, machines were operated by skilled men who received a higher rate of wages than ordinary bench-hands; now they are all operated by boys at low wages. There should also be a stringent law for the inspection of buildings in course of erection, by building inspectors, for where there are no inspectors, contractors are liable to be very careless.

---

No. 21. I am in favor of a strict apprenticeship system of a term of not less than three years. My reasons are that there would be better mechanics who would do better work and receive better pay, and it would be for the benefit of mechanics who had already learned their trades. Machinery has taken the places of thousands of wage earners and debarred them from making an honest living, and has reduced wages from 25 per cent. to 50 per cent.

I would also ask why the law compelling semi-monthly pay is not enforced?

---

No. 23. I favor either an apprenticeship system or an industrial school training, and if I could have my way I would not work with

a man who had not served an apprenticeship, nor would I employ one either. The reason why there are not better mechanics now, is because boys say that it does not pay them to apprentice themselves to this trade as they can get better wages as contractors' laborers, and pick up a knowledge of the trade as they go along.

---

No. 26. A boy could attend school until he was grey and he would not learn to work because he must have practice at actual work. You you will admit that there can be more knowledge gained by traveling, than from reading books of travel, and it is the same case with this trade.

---

No. 27. I do favor an apprenticeship system, as if something is not done very soon in that direction, carpentry will be one of the lost arts.

---

No. 34. I do favor an apprenticeship system, as then a boy gets an opportunity of knowing just how hard a trade it is to work at.

There should be something done to compel contractors to pay wages in cash at least every two weeks, and to do away with the pernicious store-order system.

---

No. 35. Yes, sir! I do favor an apprenticeship system. My reason is that a great many young men start at this business without being apprenticed, and in the course of a few weeks they can do the rough work at the business for which they are paid about $1.25 per day, and of course they keep good mechanics out of work.

---

No. 36. I favor an apprenticeship system, as it gives poor boys who cannot afford to go to the schools an opportunity to learn trades.

---

No. 41. I favor the industrial school training, because the boy learns the theoretical part of the trade, and he gets practice in the use of tools. Competition is so great in this trade now, that no one has time to teach a boy the trade properly, so that he might become a first-class mechanic.

---

No. 42. I favor an apprenticeship system, as when a boy serves his term of three years he will be a carpenter.

---

No. 43. I favor the apprenticeship system, as it is better; my reasons are, that a simply theoretical knowledge of this trade does not fill the requirements, and unless some plan is devised by which our young men can get a practical knowledge of the building trades, it will be but a few years until the old mechanics will be gone, and there will be none to fill their places, unless we resort to the importation of foreign mechanics to this country.

---

No. 45. I favor a stringent apprenticeship system, for under the loose regulations which are in vogue now, an apprentice cannot be held against his will, long enough to become a competent workman.

---

No. 48. I favor an industrial school training, as I am under the impression that it would tend to better the condition of mechanics in this business.

No. 49. I favor the apprenticeship system for the reason that very few workingmen can afford to send their sons to industrial schools, as the parents need their earnings too badly.

---

No. 50. I favor an industrial school training. My reasons are, that about eight out of every ten so called carpenters in this town never served an apprenticeship at a trade, and a saw and hatchet are about all the tools they are competent to use. And by such men being employed we are obliged to work for low wages or no wages but store-orders and get the scanty wages in many cases the best way we can.

---

No. 55. I favor an apprenticeship system, as we need better mechanics. I favor eight hours for a day's work and an amendment to the mechanics' lien law by which every man who earns a day's wages can collect it.

---

No. 56. I favor the industrial school training. My reason is, that boys so instructed become more intelligent workmen by being trained in the theory as well as the practice.

As to the wish expressed in your circular to do something for the improvement of the condition of working men, I would suggest that a law be enacted and enforced imposing a penalty on any employer who pays his workmen with store-orders, thereby placing them at the mercy of sharks who demand any price for their goods they see proper.

I was paid with such an order some time since, and was obliged to pay from eight to twenty per cent. more than I could have purchased the goods for if I had the ready cash.

---

No. 58. I do favor an apprenticeship system, because the laboring people cannot afford to send their sons to schools to learn trades; besides an apprentice will know more about the building trades by working on buildings.

---

No. 59. I am in favor of the apprenticeship system. I cannot speak for training or industrial schools as I have never been in one, nor have I ever worked with any of the graduates of them. I think a boy should serve an apprenticeship of at least three years to become a competent carpenter.

I, for all I am a journeyman carpenter favor ten hours for a day's work, for I cannot see how an employer can be expected to pay ten hours wages for eight hours work. I also think that wages should be paid every week in cash or at the farthest semi-monthly. The apprenticeship system as it is now in force is simply no system at all, as young men here are not taking any interest in it whatever. A boy will go to work at this trade without any indenture and will want journeyman's wages the first year. In about the second year he will start out as a mechanic. This state of affairs results in American boys being only what are termed "chunks," and the Germans and other foreigners who have served a regular apprenticeship to the trade are made foremen and bosses.

I believe the industrial schools will be a success in turning out boys, who after a term at outside work will be first-class carpenters.

No. 60. I do not favor either apprenticeship or school training. My reasons are, that in this town there are a new set of green hands employed every spring, who by the end of the year call themselves carpenters; we call them "chunks" or "jack carpenters," and there are four of them to every regular carpenter now on every job.

No. 61. I do favor both systems, apprenticeship and training schools, because the schools are sure in time to elevate and promote the education of boys into competent and practical mechanics. There are hundreds of men in this town now, who never served a day at the trade, only as laborers, but they want carpenters wages all the same.

## CARPENTERS—ERIE COUNTY.

No. 2. I prefer the training in an industrial school, as the knowledge a boy acquires in such school is fundamental and they get also a knowledge of architecture.

No. 4. I believe in a boy showing some natural inclination for a trade before he is put at it as an apprentice. Then it makes no difference whether he serves a regular apprenticeship or attends an industrial schools he will make a mechanic. If he has no such inclination he will be a "stick" in whatever trade he tries to learn.

No. 6. I favor both systems; as no one can become a good practical workman unless he is properly instructed.

## CARPENTERS—CRAWFORD COUNTY.

No. 4. I favor an apprenticeship system, and a rigid one, such as the old indenture system was. The industrial and training schools turn out more by half than there are turned out under the apprenticeship system, and they do not make as good mechanics.

No. 5. I favor the industrial school training. My reason is that contractors take apprentices and keep them doing laborers' work and teach them absolutely nothing about the trade. When their time has nearly expired, the plan is for the employer to start a quarrel with the boys, and send them adrift without a knowledge of their trade, and in many cases broken in health by the hard work that they have been forced to do.

No. 8. I favor both systems, and see no reason why one should not be as good as the other if they give the boy a chance to learn the trade.

---

No. 9. I favor the apprenticeship system, because under it only those who develop the ability can become mechanics.

---

## CARPENTERS—CAMBRIA COUNTY.

---

No. 2. I am in favor of the apprenticeship in an industrial school, as I am of the opinion that they are better fitted for the trade if taught in that way than by the so called apprenticeship system, as it is in vogue now.

---

No. 6. I would favor an apprenticeship system, say of about one apprentice to ten journeymen; then boys so taught would become better mechanics. As it is now, a boss may have half a dozen apprentices and none of them will be taught his trade properly. I would favor a strict law to be enacted governing the apprenticeship system; that the term should not be for less than four years and there should be an indenture binding alike upon the boy and his master, and that the boy should be at least seventeen years of age at the commencement of his term.

This system with a reduction of the hours of labor to eight a day, and State arbitration for all labor troubles. These changes would in my opinion result in great good to men in every trade.

---

No. 7. I favor a training in an industrial school. My reason is, that boys will get a more thorough knowledge of the business than under the so called apprenticeship system.

---

No. 15. I favor the apprenticeship system, because under it a boy can earn some money and learn the trade at the same time.

---

No. 16. I favor the industrial school training, so that the boy may get an education along with the trade. A man to be a first-class carpenter should know something of mathematics, geometry, and the use of plans and drawings.

---

No. 20. I am not positive that I understand just how the industrial schools are conducted, but if boys can obtain an education in them in connection with the trade then I would favor a school training.

---

No. 21. I favor the industrial school training. My reason being that the school would develop a better grade of workmen. There are too many incompetent men now, who are willing to work for any wages they can get. Carpenters in this section receive lower wages than men in any other of the building trades, and they are at a

greater expense for tools, etc. This state of affairs might be remedied if men were required to have a complete knowledge of the trade before they were permitted to work at it.

---

## CARPENTERS—BUTLER COUNTY.

No. 1. I favor the industrial school training as in them, a boy is educated in the way work should be done, and in the use of tools.

No. 2. I favor the industrial schools, as under that system we soon would have a better class of mechanics.

No. 3. I favor the apprenticeship system as being the only practical one. I would also favor a State Board of Arbitration which would adjust the differences between the employers and employed, and the decisions of such board to be final.

No. 4. I favor the industrial schools, as boys learn more in them.

No. 5. I favor the apprenticeship system. My reason being that the training is more practical.

At present the hours of labor in our trade are too long (10); and we workingmen hope that the time is not far distant when the legislature of our State will enact a law making nine hours a legal day's work, thereby doing something for the bone and sinew of the land, instead of always legislating for capitalists and corporations.

No. 6. I favor an industrial school training. My reason being that in them there is system, and a boy attains a better and clearer knowledge of his trade and also saves time and labor.

No. 7. I am in favor of the industrial school training, because the majority of contractors will take boys as cheaply as they can get them, and in a year they are called carpenters, and their employers pay no heed as to whether they are learning anything or not. I have been a foreman for contractors and I know whereof I speak. I want some system whereby we can have first-class workmen that can do any work in this trade which they are put at.

No. 8. I am in favor of the apprenticeship system, as the boys wages are of great use to his parents.

No. 12. I favor the apprenticeship system, for I think a boy should learn his trade by actually working at it.

No. 14. I favor an industrial school training, because boys get a more thorough and practical training in them.

No. 16. I do not favor the apprenticeship system, because under the apprenticeship system, as it is now conducted, boys never have a chance to half learn the trade which results in too many botch workmen.

---

No. 17. I favor the apprenticeship system, as in schools they cannot get enough experience in the work. Let a boy go right out on the building, there is the place for him to get his trade, and not in schools.

---

No. 19. I favor training in industrial schools. My reasons are that in them a boy gets the proper instructions, as under the apprenticeship system as it is now conducted, a boy rarely stays with one employer long enough to get anything but a rudimentary knowledge of the trade, and then he leaves and calls himself a mechanic.

---

No. 20. I favor the industrial schools. My reasons are, that an apprentice working for a contractor is taught very little and if he is not apt and has a natural liking for the business, he has a poor chance of ever making a good mechanic.

---

No. 21. I favor the apprenticeship system with restrictions, namely, that a contractor should have only one apprentice to from eight to ten journeymen.

---

No. 22. I favor an apprenticeship system, as under it a boy not only has the advantage of seeing the work done, but he gets the opportunity of doing it himself.

---

No. 24. I favor the training schools, because the majority of employers just start boys out to work with journeymen that neither know nor care how they get along, and so the boy is left to work his own way along and never becomes a skilled workman.

---

## STONEMASONS—ALLEGHENY COUNTY.

---

No. 1. I favor the apprenticeship system, as a boy gets more of a practical experience while learning his trade.

---

No. 3. I favor the apprenticeship system, as by it the boy gets more practical knowledge from his employer and the journeymen with whom he works.

---

No. 9. I favor the apprenticeship system, as a boy gets a more practical knowledge and understanding of his work.

## PLUMBERS—LACKAWANNA COUNTY.

No. 9. I favor an apprenticeship system. My reasons being that graduates from the industrial schools will eventually overcrowd the trade which will result in a reduction in wages; and besides, a pupil in an industrial school cannot get the practical experience that the apprentice will while actually working at the trade.

## CARPENTERS—LYCOMING COUNTY.

No. 1. I do favor an apprenticeship system, but have nothing against the industrial schools. Not being familiar with their workings.

No. 2. I favor the industrial school training and hope to see the day when we will have them in this section of the State, because they will turn out better workmen who will command better wages.

No. 3. I do not know much about industrial schools, but I would think they would be very helpful to boys wishing to learn this trade, because they teach the use of plans and drawings, which knowledge a boy cannot get as an apprentice.

## BRICKLAYERS—LYCOMING COUNTY.

No. 2. I favor apprenticeships, because boys learn the trade from practical experience.

No. 3. I favor the apprenticeship system, because it is the only method by which a boy can get experience at all kinds of work.

No. 4. I favor the apprenticeship system. My reasons being, that the boy is brought into close touch with journeymen by which he acquires greater proficiency in a shorter time, and especially because it inspires him with the desire of emulating in skill and speed those journeymen who excel in the craft. There are many practical lessons to be learned while working on a wall which cannot be taught in a school.

No. 5. I favor the apprenticeship system, as under it boys will acquire a better and more perfect knowledge of the trade.

No. 6. I favor the industrial school training, as I think it will after a time result in turning out better and more skilled mechanics. I am in favor of compulsory arbitration, as well as compulsory education, and a law which would prohibit children under sixteen years of age from working which would give the men a better chance.

---

No. 11. The building trade can be taught best on buildings where the work is done and good material used, as an apprentice should be taught all about the composition of the material used in his trade. The greatest detriment to both the bricklayer and his employer is the handy saloon, as if we are at work and a shower comes up, a great many of the men resort to the nearest saloon and if after an hour or so the weather clears again either the bricklayer or hod-carrier is not fit to go to work, and the rest of the day is lost. These as a general thing are the loudest in condemnation of the wages they receive.

---

## PLASTERERS—LYCOMING COUNTY.

No. 1. I favor a four years' apprenticeship term after a course in an industrial school to learn drafting, etc. If that term of apprenticeship was insisted on there would not be so many so called mechanics who are willing to work for any wages they can get.

---

No. 2. I favor the industrial school training. My reasons are that in the present loose apprenticeship system it is the only means by which boys can be made good mechanics, which in time will result in doing away with the "jacks" of the trade.

---

No. 3. I favor an apprenticeship of from three to four years. Two-thirds of the mechanics in this business only get half a trade by reason of their not serving half of their apprenticeship term, and never having had a training on good work.

---

No. 4. I favor an industrial school training. My reasons are, that apprentices are frequently taken by men to learn plastering who themselves are not masters of the trade, and it is to be presumed that at the schools, a man must be a master of the business before he can receive an appointment as an instructor.

---

## CARPENTERS—LYCOMING COUNTY.

No. 4. I favor the industrial school training, because when a boy is taught a trade in them, he gets it better than when he is obliged in a manner to pick up what he knows by practice only.

No. 5. I prefer the industrial school training. My reasons are, that under it there will be more skilled mechanics and fewer "hatchet and saw" men as they are termed.

---

No. 6. I favor both systems. The schools cannot give the pupils instruction in some branches of the trade that a carpenter must know; so a certain term of apprenticeship under a skilled foreman is absolutely necessary.

---

No. 10. I favor an apprenticeship system, as I do not think it is possible for a boy to get a thorough knowledge of carpentry in all of its branches in an industrial or training school. A man to be a competent carpenter must understand all sorts of repairing as well as the great variety of new work which is used on a building. An apprenticeship system which would require a certain degree of skill, and a strict apprenticeship law which would compel boys to serve a full term as apprentices before they could procure work as journeymen, and also that would compel the master to give the apprentice opportunities of working at all the branches of the trade, would remedy this.

---

## MISCELLANEOUS.

---

### Erie County.

No. 25. Painter.—This trade has gotten to be in a measure no trade at all for the want of a strict apprentice system. Therefore I favor the industrial school instruction.

---

No. 26. Painter.—The apprenticeship system would be all right if boys were obliged to serve their time in full.

### Mercer County.

No. 1. Bricklayer.—I favor the apprenticeship system. My reason being that a boy working on buildings has the better opportunity of becoming a good mechanic.

---

No. 6. Plasterer.—I favor the apprenticeship system, as a training at actual work is superior to any school system.

---

No. 7. Plasterer.—I favor the industrial school training, as they have more competent instructors at the schools.

---

No. 8. Plasterer.—I favor the apprenticeship system if boys are bound in legal form, and compelled to serve the required time: These are the boys who make the first class mechanics.

No. 9. Plasterer.—I favor a training in the industrial schools, as under the present loose apprenticeship system I have known boys to work a year or so and then commence as contractors.

---

No. 14. Stonecutter.—I favor an apprenticeship system, as a boy who serves his full term and is master of his business can command good wages and usually does so.

---

No. 15. Stonemason.—I think a boy should have a good education before he goes as an apprentice, and should learn his trade by actual work.

---

No. 16. Stonemason.—I favor the apprenticeship system if boys are compelled to serve not less than three years under a rigid indenture and a first-class instructor; otherwise I favor the industrial schools.

---

No. 19. Stonemason.—It would be difficult to instruct a boy at this trade in an industrial school, but for some trades the instruction would be more thorough in them than under the apprenticeship system.

---

No. 23. Stonemason.—I do not favor either system, as there is not work enough now, and if there are more turned out of training schools, we will all starve together.

---

No. 3. Painter.—I am in favor of a rigid apprenticeship system of not less than three years. If that rule was carried out, there would be fewer botch workmen who compete with trained mechanics who have paid for their knowledge with their time.

---

No. 9. Painter.—I favor the industrial school training, as I believe that boys are taught this trade better.

---

No. 12. Painter.—I believe in the industrial school training, as it would give us a better class of mechanics who would command better wages.

Blair County.

No. 1. Bricklayer.—I favor the apprenticeship system, as I know all about that, and I do not understand the school system.

---

No. 2. Bricklayer.—I favor the apprenticeship system. I never worked with a graduate or pupil from any of those schools, but I fail to see how they can be good mechanics unless they have the practice.

---

No. 13. Stonemason.—I favor an apprenticeship system, as a boy cannot learn to lay stone in a school.

What is of more importance to men in this section than any apprenticeship system, is to have a lien law enacted whereby a mechanic could recover his wages; and another law compelling contractors to pay wages weekly or at farthest semi-monthly in cash, for there is too much of the store-order system in vogue in this town now.

No. 17. Stonemason.—I am in favor of the industrial schools. My reasons are, that boys do not get the opportunities as apprentices which they should have and those that are apprentices now, as a general thing have no one to take enough interest in their welfare to teach them, and so they are obliged to pick the trade up, so to speak, for themselves.

---

No. 19. Plasterer.—I favor the apprenticeship system, but it makes no difference where or how a man has learned his trade he can always learn something more, as he works with different men who have different methods of working.

---

No. 20. Plasterer.—I favor the school system, as under it there will not be so many "would-be" mechanics. I presume that the schools give boys who graduate some sort of certificate of proficiency, whereas under the present apprenticeship system, which is in reality no system at all, boys can work a year at the trade and then set up for journeymen, for they imagine they know it all.

---

No. 21. Plasterer.—I favor either the industrial or training school system, or a regular apprenticeship under bonds or indentures, both the master and boy to be equally bound, one to teach the boy his trade thoroughly, the other to serve his full term of apprenticeship. This system will protect mechanics who have served a full apprenticeship and have a record as competent workmen from so-called mechanics who have not served but a year or so, and then perhaps start as contractors. The latter class are the cheap workmen of the trade.

---

No. 25. Plasterer.—I favor the industrial schools. My reasons are, that apprentices learn but little under the present system, as employers for the most part care nothing about whether the boy is being properly instructed or not, their only solicitude is the amount they can make out of his labor. The journeyman is supposed to teach the boy and as he gets nothing for it, as a general thing he does not care whether the apprentice learns anything or not, so it is very little that the boy learns.

---

No. 27. Plasterer.—There are apprentices employed in this trade here, but very few of them serve their full term. I would like to have a law enacted that would compel a boy to serve his full time, and that no man should be employed as a mechanic unless he had a certificate or diploma showing that he had done so. Then we would have good mechanics who would command good wages.

---

No. 30. Plasterer.—I favor an industrial school training, because a great many employers in this trade who take apprentices are not competent to teach them, because they themselves do not know it as they should and care nothing about whether the boy gets the trade or not. I also unqualifiedly condemn the pernicious store-order system, as it is practised in this vicinity, and which we are obliged to take for our labor or we cannot get employment.

## MISCELLANEOUS BUILDING TRADES.

### Westmoreland County.

No. 3. Bricklayer.—I favor the apprenticeship system. My reasons are, that a boy having attended a school and been taught the theoretical part of the business I do not think he would take kindly to the practical part, and without that, he could not expect to become a master builder or even a competent journeyman.

No. 16. Stonemason.—I favor both systems; as I think the school training followed by a term of apprenticeship at actual work is better than either system alone.

No. 18. Stonemason.—I favor an industrial school training. My reason is, that a boy will be more competent and make a better workman, if after he graduates from the school he serves a term at actual work under the instruction of competent journeymen.

No. 19. Stonemason.—I favor the industrial school training, as I think that we would have a better class of workmen by reason of their teachings.

No. 22. Stonemason.—I favor the preliminary training in an industrial school, providing the boy afterwards gets a course or term at actual work under the teaching of practical mechanics. The majority of boys who go as apprentices to this trade serve only from one to two years, and then think they know it all and set themselves up for mechanics. It looks to the general public as if we made good wages, but there is a difference between our wages and our earnings. Our work is only for six or seven months in the year as we cannot work in winter nor in summer when the weather is bad. Then of late years in this section we are obliged to compete with a foreign element that can work for wages upon which American mechanics would starve.

No. 23. Metal Roofer.—I am greatly in favor of the training schools, as a boy gets thoroughly instructed in the use of plans as well as tools and to be quick and correct at figures.

No. 24. Metal Roofer.—I favor the industrial school training, as it would be a great advantage to boys learning our trade.

No. 25. Metal and Steel Roofer.—The apprenticeship system is preferable, I think. My reasons are, that they have no means of teaching boys practically in industrial schools. It would be well enough as a preliminary training, but they should serve at least one year after leaving school at actual practical work; but as a rule, boys from the schools think they know too much to be taught any more by a practical man.

No. 26. Metal Roofer.—I favor the apprenticeship system, as it

gives those boys who have no money to attend industrial schools a chance to get a trade.

---

No. 30. Painter.—I think the industrial school training is preferable, as under it a boy will have more chance to make a study of his trade.

---

No. 1. Painter.—I favor the industrial school training, because there does not seem to be any regularly recognized apprenticeship system in this country, and boys don't seem to get an opportunity of learning.

---

No. 2. Painter.—I would favor one year at the industrial school and three years apprenticeship; as practice as well as theory goes to make up the skillful mechanic.

---

No. 4. Painter.—Training in an industrial school would, I think be the best, as a boy would have a better opportunity of learning his trade and would receive better wages when his term had expired.

---

No. 6. Painter and Paperhanger.—I favor the apprenticeship system, as actual experience is more profitable to a boy who wishes to learn our business.

---

No. 8. Painter and Paperhanger.—Although I never served a regular apprenticeship myself I am in favor of it, because the majority of young men who serve an apprenticeship for the full term are better qualified to get and hold good positions, and are as a general thing better workmen.

---

No. 9. Painter.—I favor the industrial schools, as in them instruction is combined with experience.

---

No. 10. Painter.—I favor the apprenticeship system, as there are different methods employed in nearly every shop in the matter of mixing paints and working.

---

No. 11. Painter.—I favor training in industrial schools, as the boys will have a better opportunity of learning their trades properly.

---

No. 12. I favor the apprenticeship system, because a boy can earn some wages for himself and at the same time be of some profit to his employer.

---

No. 14. Painter.—I favor an indentured apprenticeship of not less than three years. As it is now in this section the boy serves about two years, then leave his employers and in some cases starts business for himself, and this injures regular mechanics, both by inferior workmanship and in the price of labor.

---

No. 15. Painter.—I favor the industrial schools, as if they were encouraged there would not be so many so called painters.

---

No. 16. Painter.—I favor a term in the school, then a term as an apprentice under a competent employer.

## MISCELLANEOUS BUILDING TRADES.

### Butler County.

No. 1. Stonemason.—I would favor an industrial school training. My reasons are—first, there is not enough of variety of work in this vicinity to do an apprentice justice, so I think the school would be the proper place; as to get a diploma or certificate he would be obliged to stay his full terms. If I was a contractor and would take an apprentice to teach him the trade, I would be fortunate if he were not in the business of contracting in about his second year, and I would have no remedy.

No. 2. Stonemason.—I do not favor industrial schools, but the apprenticeship system as it serves to keep up wages and there are not so many half-taught workmen turned out under it who work cheaply.

No. 13. Plasterer.—I prefer the apprenticeship system, as the boy will have a better knowledge of the various kinds of work by working in different localities.

No. 14. Plasterer.—Apprenticeship is best in my estimation. The training school will no doubt turn out good theoretical mechanics but not practical ones. If apprentices are compelled to serve the full term, they usually turn out to be good practical mechanics.

No. 21. Bricklayer.—I favor an apprenticeship system. The schools give a boy the knowledge of plans, drawings, etc, but a very limited knowledge of the use of tools. The boy may have the theoretical knowledge, but in my opinion he will never know how to do the work.

No. 26. Painter.—I favor an apprenticeship system, as there are too many experimental institutions for squandering money now without creating new ones.

No. 28. Painter.—I favor an apprenticeship system, as an industrial school training is too expensive.

No. 29. Painter.—I think the industrial schools will turn out the best mechanics. I do not believe that a master painter cares whether an apprentice learns or not; his only care is to get as much work as he can for the least money out of the boy.

### Lancaster County.

No. 2. Bricklayer.—I favor the apprenticeship system. The schools are doubtless very good for teaching boys the use of plans, etc., but the practical instruction is also needed.

No. 3. Bricklayer.—The industrial training schools are very good and I approve of them, but the different parts of this trade cannot be

properly taught in a school, namely, the difference in material; and a man must gain the experience of the various kinds of mortar used by the trade. This knowledge can only be gained by actually experimenting with it.

Lackawanna County.

No. 3. Carpenter.—I favor an apprenticeship system by all means. My reasons are, that there are too many men now working at this trade who never served a day at it, which it nothing but ruinous to any trade, particularly this one.

---

No. 4. Carpenter.—I favor the industrial school training, as the majority of boys who go as apprentices to this business do not finish their terms, but if they are handy with tools, they are in business for themselves before they are of age. As to other things for our benefit, I think a semi-monthly pay law and a lien law which would make our wages comparatively safe would help us.

---

No. 1. Painter and Paperhanger.—I favor the industrial schools. I presums a graduate of the school must have a knowledge of the trade before he could graduate and he could command good wages. A great many apprentices work about long enough to get some idea of the work, and then will leave their employer to go with some other one at lower wages than mechanics would get, thereby keeping a competent mechanic out of work.

---

No. 6. Bricklayer.—I do not favor the industrial schools, because I think the sons of journeymen bricklayers should have the first chance to go as apprentices. Boys from those schools are hardly ever competent to hold a situation at the trade unless they serve a term at the business under instructions.

Cambria County.

No. 1. Bricklayer.—I favor the industrial school training as it is better and surer.

---

No. 3. Bricklayer.—If I had a son and had not the means to send him to one of those industrial schools to learn the trade I would favor the apprenticeship system. If the training schools were free I would prefer that he should go to one of them.

---

No. 10. Stonemason.—I favor the industrial school training, as under the apprenticeship system there is too much time lost in instructing boys, and then we have to take the blame for their mistakes.

---

No. 14. Stonemason.—I favor apprenticeships. A boy who is an apprentice to this trade should take the tools and actually work at it, for in a school he is taught the idea of one man only—the instructor. Whereas as an apprentice he sees the various ways of working of numbers of men.

No. 25. Slate Roofer.—I favor an apprenticeship system as a boy who serves an honest apprenticeship of from three to four years is able to do any kind of work at this business and does not need anyone to show him how.

Venango County.

No. 1. Bricklayer.—I favor an apprenticeship system that boys in this locality who wish to learn trades cannot afford to go to where there are industrial or training schools.

---

No. 4. Bricklayer.—I favor the apprenticeship system, for the reason that working with journeymen teaches a boy to be a rapid workman.

---

No. 5. Bricklayer.—I favor the industrial school training, as boys will learn more because they will get more attention from their instructors in less time than they would get from contractors if apprenticed to them.

---

No. 11. Stonemason.—I favor industrial schools. My reason being that in this trade a boy should not go as an apprentice unless he is eighteen years of age, but a boy can commence in an industrial school at the age of fifteen with beneficial results.

---

No. 19. Plumber.—I favor the apprenticeship system. My reasons being: First, that a boy gets a more thorough and practical knowledge of the trade. Second, it will prevent the business from being overcrowded as it eventually would be by scholars from the industrial schools.

In answer to your request to state anything which in my opinion would tend to benefit my condition, I would say that in my opinion a man before being permitted to work at the plumbing trade, should be required to pass an examination and have a certificate of competency from a board of examiners, and every city and town having a sewerage system and a water supply should have such a board, to whom a plumber should be required to show his certificate before going to work. This system would prevent incompetent men from securing work at the trade and working cheaply, as they nearly all do to the exclusion of mechanics.

---

No. 21. Painter.—I favor the apprenticeship system, as very few mechanics and workingmen can afford to send their sons to training or industrial schools.

---

No. 24. I favor the industrial schools, as I think they will be the means of turning out better workmen, as under the apprenticeship system as it is conducted now, boys are not half taught.

---

No. 26. Painter.—I favor the apprenticeship system as being better for poor boys, for they are receiving wages while learning their trade.

---

No. 28. Painter and Paperhanger.—I favor the industrial schools if they are not in prisons or reformatories, for the reason that an ap-

prentice does not remain long enough with his employer to get his trade properly, and there does not seem to be any law to compel him to.

---

No. 29. Painter and Paperhanger.—I favor some good apprenticeship system as it would give boys better opportunities of learning trades properly.

---

No. 30. Painter.—I favor the industrial school training, as boys would get better teaching in them in their trade than they could in a paint shop.

Beaver County.

No. 10. Stonemason.—I do not understand anything about how the training or industrial schools are conducted, but I think a man should have a practical knowledge of the trade.

---

No. 11. Stonemason.—I would favor a strict apprenticeship system, also that no man should be permitted to work as a stonemason unless he had a certificate to the effect that he had served an apprenticeship term and was a competent workman. There is too much work done in this county now by unskilled workmen who are employed because they work more cheaply than skilled mechanics will.

---

No. 13. Stonemason.—I fail to see how a boy can learn this trade, or that of bricklayer thoroughly in a training school, so as to make good practical mechanics. So I favor the apprenticeship system.

---

No. 16. Bricklayer.—I learned my trade in England where boys are regularly indentured to their employers when they wish to learn a trade. If that was the rule in this country there would be more efficient workmen than there are now. I am not in favor of industrial schools.

---

No. 18. Bricklayer.—I do not believe in industrial schools, but am in favor of the apprenticeship system so that the boy can see the methods of working by different journeymen and the different ways they have of working. In a school he would be instructed by one man.

Lawrence County.

No. 4. Bricklayer.—I favor both systems. Although I fail to see how bricklaying can be taught in any other place than on the walls of a building. I believe though that some trades can be taught more thoroughly in the schools than outside.

---

No. 5. Bricklayer.—I favor the apprenticeship system, because under the school system there would be too many so called mechanics which will work injury to the trade. As it is now, a contractor who has a rough job, will employ two good practical mechanics to raise the corners and then fill in with inferior men at low wages. It is cheap work and looks cheap when it is finished.

No. 11. Stonemason.—I favor training in industrial schools, as boys from them make better and more practical workmen than those who, as it were, take up a trade at random without any previous training.

---

No. 16. Metal and Slate Roofer.—I favor an apprenticeship, as a boy can certainly get a better knowledge of this trade by working on the roof at all branches of it.

Blair County.

No. 1. Painter.—I favor the apprenticeship system. The apprentice is more likely to get a knowledge of the trade by working with journeymen, as it must be much easier to learn by experience than from theory. The number of apprentices that an employer should be permitted to take, however, should be limited to one for seven or eight journeymen.

---

No. 3. Painter.—I favor the industrial school training, because a boy will be kept at the trade and not be like an apprentice who is half the time at laboring work or at anything else but painting.

---

No. 7. Painter.—I favor the industrial school training, because it gives every boy an equal chance with the others. Causes and effects are taught in them, and I presume the system of mixing paints is also taught, which certainly is not taught by employers outside.

# STRIKES DURING THE YEAR 1894.

During the year 1894 there were twenty-nine strikes in the State, as against fifty-three the previous year. But unlike those of 1893, when only one strike of magnitude occurred, that of the employes of the Lehigh Valley railroad, there were three strikes in this year which resulted in a great destruction of property and a loss of several lives, and one of which necessitated the calling out of two regiments of infantry and a troop of cavalry of the State militia before it could be put down.

A number of the employes of the mines in the bituminous coal region in the western part of the State had gone on strike in the months of October and November, 1893, and these strikes were still unsettled at the beginning of 1894. The trouble began originally in consequence of a reduction of the miners' wages and culminated in a bloody riot, which commenced at Mansfield, Allegheny county, on January 26, when, about 4 o'clock p. m., a band of striking miners made an attack on one of the coal works and attacked the tipple. They broke the windows and drove the occupants out and then attempted to fire the buildings and attacked the employes who had remained at work and beat some of them very badly.

The next morning the now frenzied strikers attacked the mines operated by Steen & Co. and took possession of the tipple, and as the cars laden with coal came out of the mine they were pushed from the tracks and allowed to drop down to the tracks of the Pan Handle railroad. After wrecking the property of the above company, the strikers marched to Tom's Run and attacked the property of the Pittsburgh Fuel Company, and beat and drove off the men who continued at work. The authorities vainly tried to quell the disturbance, but the destruction of property was kept up until about 2 o'clock. They made an attack on the plant of Beadling Bros., and here the first serious resistance was encountered. This company had armed a number of guards, at their own expense, with Winchester rifles and the rioters, not seeing any persons about the works, imagined they were deserted and charged on them, yelling and firing revolvers, but when they received a volley from the Winchesters of the guards they halted and, on another volley being fired into their ranks, they broke and scattered to the hills. A number of them were

wounded and the guards pursued the fleeing men and arrested a number of them, who were subsequently tried and sentenced to various terms of imprisonment.

Some rioting occurred after that of January 27, but the companies having adopted the plan of arming guards to protect their property, the region was soon restored to quietness.

It was estimated that over $100,000 worth of property was destroyed by the strikers.

---

The next serious labor disturbance occurred in the Connellsville coke regions, and the scenes enacted in 1891, during the strike in the same region were repeated.

Under an agreement made the year previous, between the coke workers and their employers, the wage scale was to be operative for one year, which ended on March 31, 1894. The operatives claimed an increase in their wages for the ensuing year which the operators refused to grant. The first of April fell on Sunday, and on the following day meetings were held and the leaders of the workingmen advised a strike. These men, the majority of whom were ignorant Slavs and Huns, aliens to our language and our laws, then resolved to cease work and to strike, regardless of the change in the condition of trade throughout the country. They first started out to intimidate the men who were willing to accept the wages offered and to remain at work. The men at the Oliver coke works left their work on Monday, April 2, leaving about 1,500 tons of coke burning in the ovens. The company, to rescue their property from destruction, employed a number of men who were ferociously attacked by the strikers and driven off after some of them had been beaten and seriously injured by the infuriated mob.

The employes of the H. C. Frick Coke Company had, by a special agreement as to the rate of wages, bound themselves to work for that rate until February 1, 1895, but in spite of this arrangement the strikers strove to intimidate these men, who were perfectly willing to work if they were protected, and so refused to go out with the others.

The larger operators in the region who had gone through a former experience with the same class of people and who, through the inability or unwillingness of the authorities to afford them protection until much property had been destroyed and many persons injured, now resolved to protect their property at their own cost, and had a large number of men upon whom they could depend sworn in as deputy sheriffs and armed with Winchester rifles.

On the afternoon of April 4th the rioters, whose numbers had been augmented until they were now a very formidable body, made an attack upon the Frick Company's works at Connellsvillle. The plant

was guarded by a small number of deputies, who ordered them to halt and not come on the property of the company. They refused to halt but came on and tried to attack the men who were at work. The deputies fired on them, but the fire was returned by the strikers, who charged and drove the deputies and workmen away from the works. Mr. Paddock, the chief engineer of the works, was seen by the now infuriated men who chased him into the tipple, shot and killed him and then threw his body through a window to the railroad tracks, forty feet below.

Mr. Paddock was a very highly esteemed citizen of Connellsville, and when the citizens of that town heard of his brutal murder, hundreds of them armed themselves and volunteered to avenge his death. They joined the deputies in attacking the strikers, five of whom were killed and a number more or less seriously wounded, and some fifty more were arrested, and the deputies had hard work in protecting them from the fury of the citizens, who would have made short work of them.

This practically settled the matter. There was some more rioting and destruction of property, but the stand taken by the companies for the defense of their property, and the sad fate of their comrades, served to dishearten the strikers, order was soon after restored. The men who were arrested were tried and sentenced to various terms of imprisonment.

---

The third strike of a formidable nature commenced about June 18th in the neighborhood of Punxsutawney, Jefferson county, among the bituminous coal miners, and the majority of the men were of the same type that caused the trouble in the coke region. The English-speaking miners realizing the depression in business that existed all over the country, were willing to work, but were intimidated and driven off.

Then the usual scenes were enacted, tipples were fired and cars burned and destroyed, and there was a perfect reign of terror in the whole region.

The strikers had improvised cannon by stopping up the ends of water pipes and had mounted them on fortifications which they built in the hills. The sheriff of Jefferson county not being able to disperse the rioters with the force at his command, called on the Governor of the State, who immediately ordered two regiments of infantry and a troop of cavalry to the scene, when in spite of the boast of the strikers that they would stand and fight the soldiers, they incontinently fled to the hills and dispersed and there was no further trouble at that time. There was considerable trouble after, however, for when matters became settled, the strikers, thinking that

there would be no trouble for them, drifted back again, and those of them who could get it resumed work, but the operatives had detectives at work, with the result that several months afterwards a number of them were suddenly arrested, tried and convicted and received long sentences, ranging from seven years down.

Causes, Etc., of Strikes.

| | |
|---|---|
| For increase of wages, | 11 |
| Against reduction, | 13 |
| Against discharge of employes, | 1 |
| For recognition of a labor union, | 1 |
| Dissatisfaction with a foreman, | 1 |
| Against additional work, | 1 |
| Estimated employes loss in wages, | $488,818 |
| Estimated employers loss, | 33,888 |
| Number engaged in strikes, | 4,838 |
| Number involved in strikes, | 4,386 |

The above does not include the amount lost by the participants in the three great strikes elsewhere mentioned, as no returns could be obtained from them.

The total estimated loss in wages from strikes and lockouts by workingmen in Pennsylvania from 1881 to 1894, has been as follows:

| | |
|---|---|
| 1881, | $542,250 |
| 1882, | 3,044,198 |
| 1883, | 1,603,284 |
| 1884, | 1,726,211 |
| 1885, | 2,734,618 |
| 1886, | 2,547,666 |
| 1887, | 1,418,059 |
| 1888, | 377,713 |
| 1889, | 44,588 |
| 1890, | 556,871 |
| 1891, | 7,076,264 |
| 1892, | 1,623,246 |
| 1893, | 1,395,424 |
| 1894, | 488,808 |
| Total, | $25,179,210 |

The following decision, which was rendered by Judge Dallas, in the United States Circuit Court, Philadelphia, on November 27, 1894,

will be of interest to employes of corporations and to working men in general. Several employes of the Reading Railroad Company were discharged by the receivers of that company for refusing to sever their connection with the society of the Brotherhood of Railroad Trainmen. The discharged men brought suit against the receivers to prevent them from discharging such of the employes of the company as desired to retain their membership in the brotherhood.

Judge Dallas, in the first part of his opinion, recites the grounds of the action and the proceedings taken under it, as fully reported in these columns, up to the hearing of the argument. The opinion then gives a concise statement of the facts as Judge Dallas accepts them from the pleadings before him, confining the consideration of the case to the petition of George S. Riley and Levi Hicks, and continues:

"The proposed discharge of George S. Riley has no connection with his membership in the Brotherhood of Railway Trainmen, but is caused solely by his failure to satisfactorily perform his duties. The circumstances disclosed in the case of Levi Hicks do not entitle him to the interposition of a court of equity on his behalf.

"Without animadverting upon his participation in the equivocal and exceptional means by which he secured his present employment, it may, at least, be said that his assumption that the fact that he so secured employment imposes upon the receivers an obligation to retain him in it, ought not to be sustained. Even if they should not be permitted to dismiss an employe because of a fact known to them when they employed him, still they should not be compelled to keep in their services one who, without their knowledge, entered it in conscious violation of a long established regulation, though with the connivance or negligent assent of some minor official. The notice of August 15, 1894, was, therefore, rightfully given and should have been regarded. The receivers had done nothing which, upon any reasonable ground, could be set up to deprive them of that freedom of action which in such matters employers and employed are alike, and always at liberty to exercise.

### Personal Rights.

"When unaffected by contractural obligation, the right to determine their personal relations pertains to all men and is no less inviolable than is their right to form them according to their own will and pleasure. Mr. Hicks might certainly leave the service of his employers for any cause, or without cause, and I know of no principle upon which the like privilege could be denied to them.

"As was said by Mr. Justice Harlan, in Arthur v. Oakes, 63 Fed. 317, 'It would be an invasion of one's natural liberty to compel him to work for or to remain in the personal service of another. * * * * The rule, we think, is without exception that equity will not compel

the actual, affirmative performance by an employe of merely personal services any more than it will compel an employer to retain in his personal service one who, no matter for what cause, is not acceptable to him for service of that character. The right of an employe engaged to perform personal service to quit that service rests upon the same basis as the right of his employer to discharge him from further personal service. If the quitting in the one case or the discharging in the other is in violation of the contract between the parties, the one injured by the breach has his action for damages, and a court of equity will not indirectly or negatively, by means of an injunction restraining the violation of the contract, compel the affirmative performance from day to day or the affirmative acceptance of merely personal services.'

"The promise made by Mr. Hicks after his petition had been filed may have been, and probably was, influenced by a desire to assure his retention of his place notwithstanding his failure to respect the notice of August 15; but it was not induced by any threat then made nor does it appear that his participation in this proceeding was objected against him. If it had been, I would not have hesitated, upon attention being called to it, to make it quite plain that no man can be prejudiced by applying to the court for relief to which he thinks he is entitled. But there is nothing of the kind in this case. The purpose to discharge Mr. Hicks unless he would resign from the association was communicated to him about two months prior to October 8, and his promise of that day was given simply in the exercise of his right of election between the alternatives which had been previously presented to his choice. The fact is that he did agree to sever his connection with the brotherhood, and though in making his selection he was doubtless confronted by a dilemma, it is obvious that he was not in any legal sense subjected to compulsion, but it is not necessary that I should, and I do not, rest my judgment upon this tardy agreement. It is at least certain by making it Mr. Hicks acquired no better position than he occupied before; and without it, I am of opinion that the receivers would have been justified in dismissing him upon grounds peculiar to him, and wholly irrespective of the broad question which he has attempted to obtrude into his case. It results that the petitioner, Hicks, has not made out a case entitling him to the relief which he seeks, and it is even more manifest that the case of George S. Riley is utterly devoid of equity.

The Broader Questions.

"Here discussion might well end and both petitions be dismissed. This matter has been pending since the 8th day of October, but no person other than those who have been mentioned has asked to inter-

vene. These petitioners assert that they represent other unnamed employes of the receivers, but it has not been shown that they do, and if it had been it would not be assumed that such others are better situated than the petitioners themselves. But even if to be regarded as class bills, these petitions could enure to the benefit of persons only whose claim to relief is the same as that of the specified claimants and whose equal title is founded upon the same alleged equity; the case of the actual plaintiffs cannot be strengthened by any averment that the case of some other person or persons, if presented, would be stronger. But it is contended that the general proposition which has been discussed at bar should be abstractly considered, and without regard to the merits of the particular cases in which it has been propounded; that the court, being informed that receivers of its appointment are alleged to be pursuing a wrongful course, should investigate their conduct at the instance of any informer—though himself without standing to complain of it—and if it should find that wrong has been done or is purposed should prohibit its continuance or commission.

"I cannot assent to this. It is hardly necessary to say that, in an ordinary case an injunction will not be awarded except at the suit of a party threatened with injury, and I am unable to perceive why, in the case of a receivership, a court of equity should be moved to restrain its receivers, or to admonish them as to their duty at the instance of an accuser who is not interested either in the cause or the particular subject to which his accusation relates. Any such practice would be anomalous. It would not be supported by either reason or authority. Its effect would be mischievous. If receivers were required to answer with respect to their official acts at the suit of a mere meddler the administration of their trust might be impeded by the constant and repeated intrusion of causeless objections; and if the courts were to give attention to every criticism which might be volunteered for its attention, they would simply invite any litigious busy-body to add his chimeras to the burthen which cases of this kind legitimately impose upon the judges. Yet, as the counsel of the petitioners have earnestly urged me to inquire, as of my own notion and independently of suggestion, whether these receivers should not be directed to abandon the position with respect to labor organizations in which a rule of the railroad company has placed them, I have carefully and fully considered the matter, and, waiving the irregularity in this case, I will, so far as I deem it to be proper that I should do so, briefly indicate my views upon the question thus pressed for solution.

### Not a New Policy.

"The rule which is attacked was established, not by the receivers, but by the railroad company itself, and several years before these re-

ceivers or their predecessors in office were appointed. Therefore, the question is not whether a policy originated by the receivers should be sanctioned, but whether they should be forbidden to continue in force a regulation which they found in operation when they assumed control of the business. It is to be observed, too, that it is not essential to the proper determination of this question that the character or objects of the association called the Brotherhood of Railway Trainmen should be either approved or condemned. In the argument submitted for the petitioners much has been said in commendation of it, and in support of the claim that it is not only a lawful body created for beneficent purposes, but is one of a class which public policy encourages and upholds.

"I think, however, that the court should not needlessly enter upon the investigation of this claim. The Brotherhood of Trainmen is not a party to this proceeding, and, therefore, its constitution, conduct and motives should not be unnecessarily scrutinized. If I entered an unfavorable opinion of it, it would be manifestly improper for me to seek occasion to express that opinion, and it would, I think, be scarcely less objectionable for me to obtrude any declaration in its favor. The ground upon which it is supposed that the courts should avail themselves of every pretext to discuss and rule upon the good or evil influences and tendencies of such associations is, in my judgment, the very ground upon which they should endeavor to firmly maintain a judicious reserve with respect to them, if, indeed, an inquiry as to their status and aims would involve the consideration of 'vexed and new questions,' of 'the greatest social problem of the day,' and of 'the burning question of modern times;' 'then, surely, the announcement of a "policy of courts" concerning them should not be attempted, but avoided.'

Not the Court's Duty.

"The solution of social problems and of vexed, new and burning questions has not been confided to the judiciary. Courts are established to administer the will of the legislature as embodied in law and not the personal—it may be discordant—views of the judges themselves on matters of public concern. Evils resulting from the inconsiderate conduct of either employers or the employed 'are to be met and remedied by legislation,' and 'in the absence of legislation to the contrary, the right of one in the service of a quasi-public corporation to withdraw therefrom at such time as he sees fit, and the right of the managers of such a corporation to discharge an employe from services whenever they see fit, must be deemed so far absolute that no court of equity will compel him against his will to remain in such service or actually to perform the personal acts required in such em-

ployment or compel such managers, against their will, to keep a particular employe in their service.' Arthur v. Oakes, 63 Fed. 319.

"The real question, however, is not whether the Brotherhood of Railway Trainmen is or is not inimical to the general welfare, but whether these receivers should be ordered to retain its members in their service, despite the company's pre-existing rule to the contrary, and against their own unanimous judgment. If such an order ought to be made, it must be because the action to be restrained would injuriously affect the interests the receivers have in charge or would be contrary to law or unjust to those immediately concerned. If there is any other consideration upon which the direction asked for could be based, counsel have not suggested it, nor do I perceive it.

"There is absolutely nothing before the court which would warrant it in holding that the trust property is likely to be injuriously affected by the receivers' enforcement of the company's rule. No one interested in that property has said so, and the receivers, who presumably are best qualified to form an opinion on the subject, and who cannot be assumed to be untruthful, have united in the statement that they believe it to be to the interest of their trust that the rule referred to should be enforced. I accept this—the only evidence on the subject—as conclusive. I am not competent to form an independent judgment upon it; and in this district the practice of the court has always been to rely largely upon the discretion of its receivers with respect to the policy and details of their management, especially where, as in the present instance, it is not challenged by any person who is entitled to question it.

### The Question of Public Policy.

"That the contemplated action is not unlawful is too plain for argument. That it contravenes public policy is asserted, but how can this be established? I know of no means of ascertaining the policy of the public in relation to personal rights but by consulting the public laws. This particular association is not a corporation, but if it was it would not follow, as seems to be supposed, that it would rightfully insist upon the retention of its members in the service of another corporation against its will. Neither is the argument advanced by showing that in some states it has been declared by statute to be a penal offense for any employer of labor to coerce or compel any person to enter into an agreement not to join any labor organization, as a condition of such person's continuance in such employer's service.

"I need not consider the effect of these enactments within the territorial limits of the sovereignties by which they have been enacted. It is enough to say that they are not to be found upon the statute book of the State of Pennsylvania or of the United States, and, therefore, they are neither applicable to this case nor mandatory upon

this court, and if any inference as to the 'policy' either of the Federal Government or of Pennsylvania can be rationally deduced from the existence of such laws in certain of the states, it would seem to be that by abstaining from similar legislation, Congress and the General Assembly of Pennsylvania have indicated their dissent from its principle. At all events, public policy cannot, in the absence of law, be enforced by courts of justice. Policy may direct its legislation in commanding what is right and prohibiting what is wrong, but the law alone determines for the court the rightful or wrongful nature of any conduct which is submitted to judicial investigation.

"I do not doubt the authority of a court of equity to restrain its receivers from treating those whom they employ unjustly or oppressively, and when its power in that behalf is properly invoked and the allegation of injustice or oppression is sustained, the protection which such a court may afford should be promptly and efficiently accorded. This, in my opinion, is and should be the law; but has a case of injustice or oppression been made out in the present instance?

### Unfair to Others.

"The rule complained of was promulgated as long ago as the year 1887; and the receivers emphatically assert their belief, which is not controverted, that no employe has since entered the service in ignorance of its existence, or joined the Brotherhood of Railway Trainmen without being aware that by so doing he violated it. There is some uncertainty as to the number of the receivers' employes who have become members of the brotherhood, but it is certain that they constitute a very small proportion of the whole force. To release these particular men from the operation of a rule which was known to them when they took employment, and which, except possibly in a few instances, occurring through the oversight or neglect of some subordinate agent, they expressly accepted, would be unfair to the others; and to wholly abrogate the rule, or to suspend its operation generally, would open the door to a complete reversal of a policy which was deliberately established by the company several years ago, and which has since been pursued.

"In short, the court is asked, in a proceeding ostensibly instituted to obtain an order for the guidance of the receivers during the brief period of their control, to enter a decree, the practical effect of which would be to permanently annul a regulation adopted by the owners of the property, and this without the consent of those now interested in it. I have not been convinced that there is anything in this case which would justify compliance with this request. It is possible there may be a few men—there cannot be many—to whom

the strict enforcement of the rule would occasion some hardship, but no such case has been made known, and the answers of the receivers display no vindictive feeling or disposition to harshness. I have no hesitation in relying upon them to deal fairly and discriminatingly with any case which may reasonably call for peculiar consideration.

"The several petitions mentioned in this opinion are dismissed."

STRIKES AND

| Industries. | Locality. | Cause or Object. | Ordered by a labor organization. |
|---|---|---|---|
| Iron foundry, | Reading, | Against a reduction of wages, | No, |
| Coal mining, | Venetia, | Against a reduction of wages, | Yes, |
| Carpet weavers, | Philadelphia, | Against a reduction of wages, | Yes, |
| Coal mining, | Grove City, | Against a reduction of wages, | No, |
| Coal mining, | Grove City, | Against a reduction of wages, | No, |
| Wire mill, | Braddock, | Against a reduction of wages, | No, |
| Coal mining, | Gomersal, | Against a reduction of wages, | No, |
| Iron works, | Pittsburg, | Against a reduction of wages, | Yes, |
| Lace weavers, | Columbia, | Against a reduction of wages, | Yes, |
| Stove moulders, | Reading, | For an increase or wages, | Yes, |
| Worsted and woolen goods, | Philadelphia, | For an increase of wages, | Not known, |
| Iron foundry, | Johnstown, | Against discharge of three employes, | No, |
| Cotton goods manufacturers, | Philadelphia, | For an increase of wages, | No, |
| Iron and steel works, | Chester, | Dissatisfied with foreman, | No, |
| Cotton and woolen goods, | Chester, | Against a reduction of wages, | No, |
| Tube works, | McKeesport, | For an increase of wages, | No, |
| Iron works, | Duncansville, | For an increase of wages, | No, |
| Cigar makers, | Philadelphia, | Firm refused to recognize cigar-makers' union, | Yes, |
| Lace weavers, | Columbia, | Against a reduction of wages, | No, |
| Blanket and cloth workers, | Philadelphia, | For restoration of former rate of wages, | No, |
| Car works, | Lebanon, | For an increase of wages, | No, |
| Yarn spinners, | Philadelphia, | For an increase of wages, | No, |
| Cloth weavers, | Bristol, | For an increase of wages, | Yes, |
| Yarn spinners, | Philadelphia, | For an increase of wages, | Not known, |
| Bolt and nut workers, | Reading, | Against a reduction of wages, | No, |
| Iron and steel works, | Pittsburg, | Against a reduction of wages, | Not known, |
| Worsted cloth, | Philadelphia, | For an increase of wages, | Not known, |
| Steel works, | Braddock, | Against additional work, | No, |

LOCKOUTS.

| Establishments. | | Number of persons engaged in strike. | Number of persons involved in strike. | Beginning. | End. | Duration—Days. | Succeeded. | Employes' loss. | Employers' loss. |
|---|---|---|---|---|---|---|---|---|---|
| Number. | Days closed. | | | | | | | | |
| 1 | 90 | 120 | 30 | Aug. 14, 1893, | March 10, 1894, | 206 | No, . . | $20,000 | * |
| 1 | 45 | 125 | 15 | Nov. 20, 1893, | Jan. 23, 1894, | 45 | No, . . | * | * |
| 1 | 42 | 50 | . . | Nov. 24, 1893, | Jan. 5, 1894, | 42 | No, . . | 3,000 | $595 |
| 1 | 213 | 83 | 9 | Jan. 13, 1894, | Aug. 15, " | 213 | No, . . | 22,000 | 7,000 |
| 1 | 9 | 60 | 9 | Jan. 15, " | Jan. 24, " | 9 | No, . . | 108,000 | 90 |
| 1 | None. | 22 | . . . | Jan. 5, " | . . . . . | . . . | No, . . | * | * |
| 1 | 45 | 85 | . . | Jan. 15, " | March 7, 1894, | 45 | No, . . | 6,000 | 1,200 |
| 1 | None. | 170 | . . | Jan. 15, " | . . . . . | . . . | No, . . | * | * |
| 1 | 14 | 14 | 100 | Jan. 19, " | Feb. 5, 1894, | 15 | Yes, . . | 1,200 | 2,500 |
| 1 | 17 | 24 | 225 | March 12, " | March 29, " | 17 | No, . . | 4,500 | * |
| 1 | None. | 200 | . . | March 20, " | March 28, " | 8 | No, . . | 2,500 | * |
| 1 | 1 | 19 | 25 | March 27, " | March 28, " | 1 | No, . . | 50 | 50 |
| 1 | None. | 100 | 150 | April 7, " | June 2, " | 54 | No, . . | 10,000 | * |
| 1 | . . . | 7 | . . . | April 17, " | April 18, " | 1 | No, . . | * | * |
| 1 | 6 | 10 | . | April 17, " | April 18, " | 1 | No, . . | 10 | * |
| 1 | 65 | 2,000 | 4,000 | May 14, " | July 18, " | 65 | No, . | 350,000 | * |
| 1 | 90 | 150 | 100 | June 1, " | Sept. 1, " | 90 | No, . . | 16,000 | * |
| 1 | None. | 240 | 150 | June 20, " | Sept. 24, " | 65 | No, . . | 40,000 | 16,000 |
| 1 | 21 | 34 | 70 | June 21, " | July 12, " | 21 | No, . . | 2,000 | 800 |
| 1 | 20 | 24 | 750 | June 25, " | July 18, " | 23 | No, . . | * | * |
| 1 | 1 | 35 | . . | Sept. 13, " | Sept. 14, " | 1 | Partly, | 50 | 50 |
| 1 | 1 | 600 | . | Sept. 18, " | Sept. 19, " | 1 | Partly, | 400 | 600 |
| 1 | None. | 100 | 100 | Sept. 19, " | Nov. 6, " | 48 | No, . | 10,000 | 5,000 |
| 1 | None. | 350 | . | Sept. 19, " | Sept. 19, " | . . . . | Yes, . . | * | * |
| 1 | 4 | 30 | 150 | Sept. 28, " | Oct. 3, " | 4 | No, . | 1,000 | * |
| 1 | 4 | 120 | . . | Oct. 1, " | Oct. 10, " | 9 | No, . . | * | * |
| 1 | 9 | 18 | 3 | Oct. 24, " | Oct. 26, " | 2 | No, . . | * | * |
| 1 | None. | 48 | . . | Nov. 5, " | Nov. 5, " | None, | No, . . | * | * |

* Not estimated.

# THE MANUFACTURE OF PIG IRON IN PENNSYLVANIA.*

## SYNOPSIS.


| | Page. |
|---|---|
| General uses of iron, pig iron, the sources of other forms of iron and steel, | 1 |
| Native iron rare, | 1 |
| Iron ores, | 2-10 |
| Utility affected by composition, | 2 |
| Magnetite, | 2 |
| Red hematite, | 2 |
| Brown hematite, | 3 |
| Carbonate, | 3 |
| Approach to chemical purity, | 3 |
| For early industries, obtained from local deposits, | 3 |
| Sources of present supply of, | 4 |
| From Lake Superior region, displace local and nearby ores, | 4 |
| Imported from other countries in twenty-three years, | 5 |
| Produced in Pennsylvania and other states, | 5 |
| Produced in the United States, Pennsylvania, Michigan, Alabama and Minnesota (table), | 6 |
| Relative production of in Pennsylvania and in the United States, 1880 to 1894 (table), | 6 |
| Production of, also of pig iron in 1892 and 1894 in various states (table), | 7 |
| Used in Pennsylvania and their yield in metal, | 7 |
| Used in Alabama, Tennessee, Georgia and North Carolina, and their yield in metal, | 8 |
| Used in Illinois and yield in metal, | 8 |
| Used in Ohio and yield in metal, | 8 |
| Used in Michigan and yield in metal, | 8 |
| Used in New Jersey and yield in metal, | 9 |
| Used in New York and yield in metal, | 9 |
| Washing and roasting of, | 9 |
| A roasting kiln, with description (plate), | 9 |
| Concentration of magnetic iron ores, | 9 |
| Pennsylvania's production of iron ores not expected to increase, | 9 |
| Mill cinder, blue billy, etc., used as substitutes for iron ores, | 10 |
| How pig iron is produced, | 10-12 |
| Manner of producing pig iron, | 10 |
| General description of a blast furnace, | 10 |


* Prepared at the request of the Bureau by Mr. John Birkinbine, Philadelphia.

Page.
The smelting process defined, ..... 11
Proportions of ore, fuel, flux and air required, ..... 11
Bloomeries described, ..... 12
Forge fires described, ..... 12
Direct processes generally unsuccessful, ..... 12
View of Laurel Forge, Cumberland county, Pa. (plate), ..... 13
Historical, ..... 13-21
First pig iron made in Pennsylvania in 1720, at Colebrookdale furnace, ..... 13
Other states antedated Pennsylvania, ..... 13
Earliest development in Southeastern Pennsylvania, ..... 13
Eastern Pennsylvania, ..... 14
Iron industries in the Schuylkill valley, ..... 14
The Cornwall furnace and ore hills, ..... 15
Estimated value of Cornwall ore hills $13,000,000, ..... 16
View and description of the Cornwall ore hills (plate), ..... 16
Extension of the Pennsylvania iron industry prior to 1800, ..... 16
Western Pennsylvania, Alliance Iron Works (plate), ..... 17
Locations of early western Pennsylvania iron industries, ..... 17
Many early enterprises failed, ..... 18
Statistics of the iron trade of Pennsylvania, 1730-1797 (table), .. 18
The old furnaces and their managers, ..... 19
Number of blast furnaces in Pennsylvania, 1810 to 1840, ..... 20
Wisdom displayed by early iron masters, ..... 20
The three eras of pig iron production, ..... 20
1720 to 1840 the charcoal era, ..... 21
1840 to 1876 the era of development, ..... 21
1876 to date the technical era, ..... 21
The charcoal era, ..... 21-35
Most of the iron made in Pennsylvania with charcoal prior to 1854, ..... 21
Statistics of the iron trade of Pennsylvania, 1810-1841 (table), .. 22
Detailed production of iron from ores in Pennsylvania, 1847, 1849 (table), ..... 23
Maximum product per furnace prior to 1840 50 tons per week, ... 24
Construction and operation of charcoal furnaces, ..... 24
Early blowing machinery, ..... 24
A cold blast charcoal blast furnaces of 1810 (illustration), ..... 24
Description of old bellows, ..... 24
Blowing machinery with wooden tubs (view of), ..... 25
Construction of an old furnace stack described, ..... 25
How materials were assembled and used, ..... 26
Length of campaigns, ..... 26
Blowing in a furnace, ..... 26
Why the crucible wore rapidly, ..... 27
Blast furnace records prior to 1841, ..... 27
Warwick furnaces built 1738, ..... 27
Durham furnace built 1727, ..... 28
Durham stoves and other manufactured products, ..... 28
Durham boats used to transport pig iron, ..... 29
The fore part, ..... 29

Page.
Cinder allowed to flow continuously, ..... 29
Iron cast into pigs from main runner, ..... 30
Transportation, ..... 30-32
Wagons and animals only used, ..... 30
Cost of hauling pig iron, ..... 31
Cost of hauling charcoal, ..... 31
Cost of hauling ore, ..... 31
Labor and cost at charcoal furnaces, ..... 32
Yield of ore used, ..... 32
Amount and cost of fuel used, ..... 32
Total cost of hauling material per ton of product, ..... 33
The iron master, ..... 33
His varied duties, ..... 33
Conditions as they existed prior to 1840, ..... 34
The canal system of Pennsylvania, ..... 34
The production of charcoal, ..... 34-35
Cost of making charcoal, ..... 35
Transportation of charcoal compared with present railroad rates, 35
Present status of the charcoal iron industry in Pennsylvania, ..... 36-37
Number of furnaces and output, ..... 36
Influence of industry on the forests, ..... 36
Selling prices of charcoal pig iron, ..... 37
The era of development, ..... 37-62
Application of mineral fuel, ..... 38
First use of anthracite coal for smelting ores, ..... 38
First use of bituminous coal and coke for smelting ores, ..... 39
Early anthracite blast furnaces, ..... 39
Mauch Chunk furnace, ..... 40
Pottsville furnace first to use closed tuyeres, ..... 40
Danville furnace, ..... 41
Roaring Creek furnace, ..... 41
Phoenixville furnace, ..... 41
Columbia furnace, ..... 41
Catasauqua furnace, ..... 41
Chickies furnace as originally built and as reconstructed, ..... 42
Number of blast furnaces, 1856 to 1876, ..... 43-45
Number of blast furnaces in Pennsylvania and United States in 1858, ..... 43
The status of blast furnaces in Pennsylvania and other states in 1858, ..... 43
Pennsylvania pig iron statistics, 1856,1864 and 1873 (tables), ... 43-44
The blast furnace industry in 1874, ..... 44
Distribution of blast furnaces in Pennsylvania, 1873, 1874 and 1876 (tables), ..... 45
Essentials for blast furnace locations, fuel, ore flux, labor and market, ..... 45
Pennsylvania specially favored in these, ..... 45
Fuel supply of Pennsylvania, ..... 46
All kinds of fuel produced in Pennsylvania, ..... 46
Growth of the anthracite coal trade, ..... 46
Bituminous coal and coke, ..... 46
Comparative values of fuels, ..... 47

Page.
Comparative analyses of blast furnace fuels (table), ..... 47
Discussion of the value of coke as fuel, ..... 47
Fuel production in the United States, ..... 48-49
Consumption of fuel in the United States (table), ..... 48
Consumption of fuel in the iron industry of the United States (table), ..... 49
Blast furnace structures during the era of development, ..... 49-51
Railroads facilitated changes in location, ..... 49
The square stone stacks gradually changed to a circular form,.. 49
Piers or columns and iron jacketted stacks follow, ..... 50
The development of the anthracite furnace (plate), ..... 50
Description of illustration of anthracite furnaces, ..... 50
The Mauch Chunk furnace of 1838, ..... 50
The Chickies furnace of 1846, ..... 50
The Chickies furnace of 1860, ..... 50
The Warwick furnace of 1875, ..... 51
The Warwick furnace of 1892, ..... 51
Top of furnace or tunnel-head, ..... 51
Crucible, ..... 52
Small crucibles and flat boshes give way to larger crucibles and steep boshes, ..... 52
The open front takes the place of the fore-hearth, ..... 53
"Working" the furnace wasteful, ..... 53
Flushing cinder adopted in place of continuous flow, ..... 53
Methods of handling cinder, ..... 53
Changes in furnace equipment, ..... 54-55
Variety of blowing apparatus used, ..... 54
Hoists in use, ..... 55
Iron pipe hot-blast stoves, ..... 55
Various forms of iron pipe hot-blast stoves described, ..... 55
Boilers, ..... 56
Kind of boilers used at furnaces, ..... 57
Boilers and hot-blast stoves carried on masonry arches, ..... 57
Conveying gas from the furnace to boilers and hot-ovens, ..... 57
Tuyers and water blocks, ..... 58
Top fixtures, ..... 59
The bell and hopper, ..... 59
Furnace capacities at the close of the era of development, ..... 59
Record of Glendon furnace, ..... 60
Record of Bethlehem Iron Company's furnaces, ..... 60
Record of Northampton furnace, ..... 60
Record of Lochiel furnace, ..... 60
Record of Bennington furnace, ..... 60
Record of Lucy and Isabella furnaces (table), ..... 60
Record of Shoenberger furnace, ..... 61
Record of Dunbar furnace, ..... 61
Record of Neshannock furnace, ..... 61
Record of Kemble furnace, ..... 61
Record of Cambria furnace, ..... 61
Record of Briar Hill furnace, ..... 61
Record of Durham furnace, ..... 61
Prices of No. anthracite pig iron at Philadelphia, ..... 62
The technical era, ..... 62-84

Page.
Modern furnace plant described, ..... 62-3
Changes in proportion of blast furnace stacks, ..... 62
Deficiencies of many locations, ..... 63
Blast furnaces operated in connection with iron and steel works, 63
Some blast furnaces control ore and coal deposits, ..... 63
Changes in practice and equipment, ..... 63
Modifications in stack construction, ..... 64
The modern furnace stack, ..... 64
Description of modern furnace stacks, ..... 64-5
Closed front used, ..... 65
Number of tuyers and openings used, ..... 65
Fire brick the best, but an unsatisfactory material, ..... 65
Protection of crucible and boshes necessary, ..... 65
Handling stock, ..... 66-67
Method of handling stock to the furnace, ..... 66
Stock houses and their arrangement, ..... 66
Extra stock carried, ..... 66
Use of charging buggies and skips, ..... 66
Possible economies in handling materials, ..... 67
Blowing in a modern blast furnace, ..... 67
Method of filling a furnace, ..... 67
Charges for furnace, ..... 68
Casting houses, ..... 68
The pig bed, ..... 69
Cinder and its uses, ..... 69
Cinder converted into road metalling paving blocks, sand and mineral soil, ..... 69
Cinder dumps, ..... 70
Casting pig iron, ..... 70
The use of iron direct from the furnace, ..... 70
The quantity so used in 1890, ..... 71
Handling pig iron, ..... 71
Selling prices of pig iron made with mineral fuel, ..... 71-72
Grading pig iron, ..... 72
Use of numbers and letters to indicate grades, ..... 72
Chemical composition and fracture both affect value of pig iron for specific purposes, ..... 72
Composition of pig iron, ..... 73
Influence of carbon, ..... 73
The chemical laboratory an essential adjunct of the blast furnace, ..... 73
Difference in casting due to dimension and form, ..... 75
Effect of maganese in cast iron, ..... 75
Effect of phosphorus in cast iron, ..... 75
Effect of carbon in cast iron, ..... 75
Effect of combined and graphitic carbon in cast iron, ..... 75
Effect of silicon in cast iron, ..... 75
Chilling properties of iron, ..... 76
Ideal car wheel iron, ..... 76
Tendency towards technical knowledge in the iron industry, ... 76
Blast furnace gases, ..... 76-77
Methods of conveying blast furnace gases to ground level, ..... 76
Efficiency of gases affected by dust and by chemical composition, 77

Page.
Gas burned in combustion chambers, ..... 77
Forms of gas burners in use, ..... 77
Tunnel head seals, ..... 77
Use of regenerative hot-blast stoves, ..... 78-80
How the stoves operate, ..... 78
Results due to super-heated blast, ..... 78
Pyrometers used to determine blast temperature, ..... 78
Value of maintaining careful furnace records, ..... 79
Influence of moisture in the blast, ..... 79
Improvements in stoves and necessity for good draught, ..... 79
Boiler equipment, ..... 80
Supplementary fuel sometimes needed in addition to furnace gas, 81
Blowing machinery, ..... 81
Bill type of engine, description of, ..... 81
Compound condensing engine, description of, ..... 82
Blast Furnace Management, ..... 82
The manager, founder, keeper and other employes, and their duties, ..... 82
Irregularities of furnace operation discussed, ..... 83
Scaffolds, salamanders and explosions, ..... 83
Banking the furnace, ..... 84
Progress, as illustrated by blast furnace operation, ..... 84-102
Pine Grove charcoal furnace, originally built in 1771,..... 84-86
Cost of making iron in 1872 at, ..... 84
Furnace reconstructed in 1877, ..... 85
Increased yield and lower fuel comsumption obtained,..... 85
Charcoal and ore obtained continuously from the same property, ..... 85
Experiments made with various blast furnace fuels, ..... 86
Warwick anthracite furnace, ..... 86
Description of plant as erected in 1875, ..... 86
Results prior to 1878, ..... 86
Results from 1878 to 1880, ..... 87
The first short blast of 1880 (table), ..... 88
Record of long blasts, 1881 to 1885 (tables), ..... 89-90
Best weekly work of long blast, ..... 90
Record of 35 weeks of long blast, ..... 91
Record of blast, 1886 to 1889 (table), ..... 91
The furnace stack remodelled, ..... 92
Record of blast, 1890-1892 (table), ..... 92
Record of blast, 1893-1894 (table), ..... 92
Comparative results obtained with anthracite coal and coke,.... 93
Resume of records for seventeen years, ..... 93
Changes in items of cost in seventeen years, ..... 93
Operation of the Warwick furnace and a southern furnace compared, ..... 94
Work of the Sewanee furnace, Tennessee, 1894 (table),..... 94
Durham anthracite furnace of 1876, ..... 94
Summary of seven blasts of the Durham furnace (table), ..... 95
Necessity of changes in furnace equipment, ..... 95
Western Pennsylvania coke furnace records, ..... 96
Results in various Western Pennsylvania blast furnaces (table), 96
Three stages of development indicated, ..... 96

Page.

Comparison of practice and operation of the Edgar Thomson and Cleveland England blast furnace (table), ..... 97
Heat requirements compared, ..... 98
Edgar Thomson coke furnaces, ..... 98
Size and total output of the Edgar Thomson furnaces (table),.. 98
Records of some of the Edgar Thomson furnaces, ..... 98
Production of the Edgar Thomson plant in November, 1894, ..... 99
Number and distribution of employes of Edgar Thomson plant, 99
Edgar Thomson plant recognized as the beginning of scientific smelting, ..... 99
How the product increased, ..... 100
The metal mixer and its use, ..... 100
Labor at old and modern furnaces, ..... 101
Comparison of labor necessary at Edgar Thomson furnaces and that necessary during the charcoal era,..... 101
One man now does the work of six or eight about 1840, ..... 102
Present record of the Edgar Thomson plant, ..... 102
Location of blast furnaces in Pennsylvania, ..... 102-103
Description of map (frontispiece), ..... 102
General groupings of furnaces, ..... 102
Summary of plants and number of furnaces in each, ..... 103
Relative position of Pennsylvania and other States, ..... 103
Proportions of blast furnaces of United States in 1885, ..... 104
Coke or bituminous coal (table), ..... 104
Anthracite furnaces (table), ..... 104
Charcoal furnaces (table), ..... 105
Resume for all fuels (table), ..... 105
Proportions of blast furnaces in the United States in 1887, ..... 106
Coke or bituminous coal furnaces (table),..... 106
Anthracite furnaces (table), ..... 106
Charcoal furnaces (table), ..... 107
Resume for all fuels (table), ..... 107
Proportions of blast furnaces in Pennsylvania in 1894 (table),..... 108
Comparison of tables, ..... 108
Number of furnaces and production, ..... 108
Relative production of pig iron in the United States and Pennsylvania, 1872-1894 (plate), ..... 108
Production of pig iron in Pennsylvania with various fuels, 1872-1894 (plate), ..... 109
Number of blast furnaces in the United States and Pennsylvania, and number active in latter, 1872-1894, ..... 109
Comparisons of plates, ..... 110
Uncertainty as to classification of furnaces, ..... 110
Percentage of furnaces in blast at various dates, ..... 111
Production of Bessemer pig iron, ..... 111
Quantity of Bessemer pig iron produced in Pennsylvania and in the United States, 1887-1894 (table), ..... 112
Analysis of table, ..... 113
Production of Bessemer pig iron in various States, 1887-1894 (table), ..... 113
Production of pig iron in Pennsylvania by districts, ..... 113
Production by districts described, ..... 113
The Lehigh Valley district, ..... 114

Page.
The Schuylkill Valley district, ..... 114
The Shenango Valley district, ..... 115
The Lower Susquehanna district, ..... 115
The Upper Susquehanna district, ..... 116
The Allegheny County district, ..... 116
The Juniata Valley district, ..... 117
Miscellaneous coke furnaces, ..... 118
Charcoal furnaces, ..... 118
Comparative costs of producing pig iron, ..... 118
Cost of producing pig iron at a southern furnace, ..... 119
Cost of producing pig iron at a Western Pennsylvania furnace, .. 119
Equating costs, ..... 119
Cost of producing foundry pig iron at an Eastern Pennsylvania furnace, ..... 120
Cost of producing Bessemer pig iron at a Western Pennsylvania furnace, ..... 121
Estimates are for materials, labor and furnace supplies only,.. 121
Cost of producing foundry iron in the Lehigh Valley for twenty-seven years, ..... 121
Decreased fuel consumption shown, ..... 122
Influence of rich ores, ..... 122
Fluctuations in prices paid for materials, ..... 122
Growth in output per furnace, ..... 123
Conclusion, ..... 123
Blast furnaces encourage other industrial developments, ..... 123
Marvelous growth of pig iron industry, ..... 123
In the past twenty-three years over one-half the pig iron output of the country is credited to Pennsylvania, ..... 123
Relative status of Pennsylvania and Alabama as pig iron producers, ..... 124
The importance of local consumption, ..... 124
Production of pig iron per capita in Pennsylvania, 1860-1890 (table), ..... 124
Production of pig iron per capita in the United States, 1860,1890 (table), ..... 125
The status of Ohio as a producer of pig iron, ..... 125
The status of Illinois as a producer of pig iron, ..... 125
Growing consumption of iron per capita, ..... 125
Capital invested in and wages paid by Pennsylvania blast furnaces, ..... 126
Influence on contingent industries, ..... 126
What census figures would show, ..... 126
Quantities of materials used in blast furnaces of the United States, ..... 126
Quantities of materials used in blast furnaces of Pennsylvania, 126
The future of Pennsylvania's pig iron industry, ..... 127
Decrease in number of furnaces not necessarily indicative of a declining industry, ..... 127
Resume of furnace plants, ..... 127
The manufacture of pig iron in Pennsylvania to continue, ..... 128

## INTRODUCTORY.

No metal is so familiar as iron and none enters more thoroughly into the daily life of each citizen, for in its various manufactured forms iron (or steel made from iron) is constantly in sight or use.

We find iron as the basis of shoe nails, buttons, keys and pocket knives which are carried on our persons. The food we eat is prepared in vessels of iron upon ranges or stoves of the same material. The water we drink and the gas we burn reaches us through iron pipes, and many of the bedsteads used are of this metal. In the construction, equipment and furniture of our buildings iron in some form or another enters largely. It also is an essential in the construction of vehicles for transportation and forms the roadway of all our railroads. From it our steam boilers, engines, tools and instruments are fabricated, and in the generation or transmission of power of all kinds iron is a most important factor. In short there is scarcely a movement in the life of a citizen of Pennsylvania in which the application of iron in some form does not enter.

As the State of Pennsylvania stands foremost among the producers and manufacturers of this metal, a sketch of the development of the industry and the processes employed to obtain iron in its crude form may well form a theme for treatment, but as any discussion extended beyond the first process would assume the proportions of a volume, the following pages are restricted, as the caption indicates to "the manufacture of pig iron in Pennsylvania;" for from this, as the basis, all forms of wrought or cast iron or steel are obtained by subsequent treatments. But the diversified industries of our citizens do not permit of an intimate acquaintance with each, and as some who read this article may be unfamiliar with the materials used in making pig iron or the structure and operation of the blast furnace in which it is produced, the following is presented as an introduction.

Although iron is one of the elements most generously distributed, its ores and compounds being the ordinary coloring ingredients of many soils and rocks, tinging them red, yellow, brown and black, it is seldom found native, and then only in meteorites, or as minute grains in basalt, or as very small veins in ore masses.

## IRON ORES.

The ores from which metallic iron is obtained are oxides, and those containing sufficient metal for use are commercially divided into the four general classes (all of which are found in Pennsylvania) given below in the order of their iron contents, if chemically pure. As won from the earth, however, the oxides of iron carry in greater or less proportions, other elements such as phosphorus, sulphur, manganese, titanium, chromium, copper, etc., which affect their value for specific uses, as do also the amounts of silica, lime, alumina, magnesia, etc.; these latter, however, generally influencing the percentage of metal obtainable from the ore while the first named, as a rule, are more likely to affect its quality. In addition the by-products known as "blue billy," or "purple ore," which remain after the sulphur has been extracted from sulphurets of iron (pyrites), and slags from puddling and heating furnaces in which iron or steel are refined, are utilized in smelting furnaces.

Magnetite. This ore is composed of 69 per cent. of peroxide of iron ($Fe_2O_3$) and 31 per cent. of protoxide of iron ($FeO$), a combination generally called "magnetic oxide of iron," containing three parts of iron and four of oxygen, and designated by the chemical symbol $Fe_3O_4$. If chemically pure magnetite would, therefore, contain 72.4 per cent. of iron and 27.6 per cent. of oxygen. As mined, it is usually of a black or blue-black color, hard, dense and strongly attracted by a magnet. Under this head are embraced commercially some martite ores which are altered magnetites. The "Cornwall ore hills," mention of which is made later on, is the most prominent deposit of magnetite in the State of Pennsylvania, and none greater is now exploited in the United States. From this deposit masses of lodestone, which readily attract and hold articles of iron and steel, have been obtained. Other magnetites are mined along the South Mountains, but, as a rule, the Pennsylvania ores of this class seldom yield as mined 50 per cent. of iron.

Red Hematite. This class comprises ores in which the iron occurs as an anhydrous sesquioxide, containing two parts of iron to three parts of oxygen, its chemical formula being $Fe_2O_3$. If pure it would analyze 70 per cent. of iron and 30 per cent. of oxygen, but Pennsylvania red hematites do not rank as high grade when compared with Lake Superior ores of this class, as the silica and alumina reduce their iron contents and they are generally high in phosphorus. Red hematite is usually of a red, or brownish-red color, although sometimes dark gray, almost black, with considerable lustre. This class includes also some "fossil" or "Clinton" ores, "specular," "micaceous," "slate" ore, etc., as well as some martite. The fossil iron ores are won in northern and central Pennsylvania.

BROWN HEMATITE ORE BANK, PINE GROVE FURNACE.

Brown Hematite. These ores contain more water than the red hematites, the iron being combined in the same form, viz: peroxide, two parts of iron with three parts of oxygen. It yields, when practically pure, about 60 per cent. of its weight in metallic iron, and is generally of a brown or yellow color, being known in different localities by structure or by degrees of hydration, as "limonite," "turgite," "pipe ore," "bog ore," "goethite," "oolitic," ore, etc. Numerous open cut workings in the limestone areas of the East Penn, Cumberland, Nittany and other valleys produce brown hematites. Some of these ores when carefully prepared by washing and screening to remove earthy impurities, average 50 per cent. of iron when smelted, but, as a rule, they carry between 40 and 50 per cent., averaging probably 44 per cent.

Carbonate. This ore contains carbonic acid combined with protoxide of iron, hence its name, the composition being shown by the formula $Fe\ CO_3$. When pure it contains 46 per cent. of iron. It is generally gray, yellow or buff and brown in color, and is variously known as "siderite," "spathic" ore, "black band," "clay ironstones," etc. This ore is obtained in the coal measures and is mined in the western part of the State. To make this ore available for use it is roasted or calcined in piles or in specially constructed kilns, but even after such treatment it cannot solely by reason of its iron contents be classed as a superior material for iron production, and is only used where it can be mined cheaply close to blast furnaces.

The nearest approach to chemical purity of deposits of ores of the different classes which have been exploited on a liberal scale are:

For magnetite. The workings at Mineville, Essex county, New York, in the Lake Champlain district, where large quantites of magnetite yielding 70 per cent. of iron have been obtained.

For red hematite. Some of the mines of the Marquette, Gogebic, Menominee, Mesabi and Vermilion ranges in the Lake Superior region have supplied considerable ore close to the theoretical limit.

For brown hematite. The same region could be instanced where most of this class of ore is merely a hydrated portion of the red hematite deposits. Wisconsin, Alabama, Virginia, Tennessee, Connecticut and Massachusetts also produced excellent brown hematites, which, like the Pennsylvania ores, need to pass through washers.

For carbonates, Ohio, Kentucky and New York stand pre-eminent.

*Where Iron Ores Were Obtained.*

The early iron industry of Pennsylvania was dependent entirely upon local ores, and up to the introduction of canal transportation, upon iron ore mines which were within convenient wagon haul of the iron works. Eastern Pennsylvania subsequently drew supplies from the magnetite mines of New Jersey and later from those of New

York. The western Pennsylvania plants originally depended upon carbonates or their derivatives obtained from nearby mines, but they now derive their supply almost entirely from the Lake Superior district. At present ores from the Lake Superior region are also sent to central and eastern Pennsylvania, and are used as mixtures with leaner local ores and mill cinder. The iron ores obtained from the Lake Superior region average higher in grade than those mined in Pennsylvania, and as they occur in large bodies, encouragement is offered for a liberal outlay of capital to provide machinery and appliances which permit of mining the ore cheaply and transporting it at a low cost for long distances. As these Lake Superior ores, owing to the iron they contain, can produce from a given quantity a greater weight of metal than many local ores, and as other constituents which deteriorate the quality of the iron ore are, as a rule, present to a smaller extent than in most of the ores mined in Pennsylvania or closer to the State, the Lake Superior mines have supplied industries which were formerly dependent upon nearby deposits; and many Pennsylvania mines, although not exhausted, are practically abandoned. This must not be understood as intimating that there are not good rich iron ore deposits nearer than the Lake Superior district, but the average ore from Pennsylvania mines, and other nearby states, is not as desirable as that from the Lake Superior region. The facilities of ocean transportation have also brought into competition iron ores from foreign lands.

The displacement of local iron ores by those obtained from the Lake Superior region, has been facilitated by the excellent mining and transportation methods which have been adopted for mines in Michigan, Wisconsin and Minnesota, for otherwise these ores, although of superior quality, could not be mined and conveyed such great distances. In some of the late developments in Minnesota ore is obtained very cheaply by stripping the covering and digging from the ore bodies with steam shovels, but the trade with Pennsylvania iron works was won by mines equipped with modern machinery and wrought with ability at depths below the surface of from 75 to 1,400 feet, producing large amounts annually. The arrangements for handling and transporting these Lake Superior ores have been of great assistance in making them available for use in the Pennsylvania iron industry and the equipment of docks and vessels for the iron ore trade of the lakes is unequalled, the highest skill backed by ample capital having been devoted to perfecting these. Probably the best illustration of these facilities will be the statement that in the fall of 1894, iron ores were won from underground workings in the Lake Superior region, carried by railroad for 90 miles to Lake Superior where, by the medium of extensive and costly docks with pockets, the ore was transported to the holds of vessels which carried

it about 1,000 miles to equally expensive receiving docks at or near Cleveland, O., and delivered the ores on piles or on cars at $2.00 or less per gross ton. The improvements made in the shipping equipment is demonstrated by the statement that in 1894 ore was mined, shipped and delivered at the lower lake docks for less money than was paid for water transportation alone from the nearest shipping docks twelve years before.

While mining appliances and methods have been introduced into other localities from which Pennsylvania draws iron ores, the improvement made has been less marked than in the Lake Superior region, the ores from New York being employed because of their richness, and from New Jersey largely because of the short distances to be covered.

The records of the importations of foreign iron ores commenced in 1872 and since then greater or less quantities have been brought in each year, the bulk of which has been consumed in the iron works of Pennsylvania. The reported quantities of foreign iron ore brought into the United States varied from 26,000 gross tons in 1876 to 1,246,-830 gross tons in 1890. The total receipts for 23 years being 11,573,-387 gross tons, most of which was smelted in Pennsylvania blast furnaces.

If distributed equally throughout the year the maximum annual importation exceeded 3,400 tons per day, and the average for 23 years is equivalent to nearly 1,400 tons of foreign iron ore received each day during that interval.

## PENNSYLVANIA AS A PRODUCER OF IRON ORES.

To show the relative position of Pennsylvania as an iron ore producer the following has been excerpted from the census reports of 1850, 1860, 1870, 1880, 1889 and the reports of the U. S. Geological Survey for 1890, 1891, 1892, 1893 and 1894.

During the census years 1850, 1860, 1870 and 1880, as well as in intermediate years, Pennsylvania occupied first position as an iron ore producer among the various state. Michigan held second rank in 1870 and 1880 as to quantity produced, but in 1889 it took first place, Alabama and Pennsylvania contesting for second place, the former getting that position by a slight advance which she has since held with increased output. Pennsylvania held third rank up to 1891, inclusive, the total production, however, declining. In 1892 Minnesota rose to third place, Pennsylvania going to fourth position, which it held until 1894 when it took fifth place, Minnesota ranking second. The changes in the relation which Pennsylvania has borne and now bears to other states and to the nation as a producer of iron ore have an important bearing upon the discussion of her pig iron industry, and hence are detailed here.

Up to the year 1880, no exact statistics were collected but the production of the four states which contributed most largely, and also of the United States in 1880, 1889, 1891, 1892, 1893 and 1894 are given below from United States records.

*Production of Iron Ore in Michigan, Alabama, Pennsylvania and Minnesota, also of the United States in the Years 1880, 1889, 1890, 1891, 1892, 1893 and 1894 in Gross Tons.*

| Years. | United States. | Michigan. | Alabama. | Pennsylvania. | Minnesota. |
|---|---|---|---|---|---|
| 1880 | 7,120,362 | 1,640,814 | 171,139 | *1,951,496* | None. |
| 1889 | 14,518,041 | 5,856,169 | 1,570,319 | 1,560,234 | 864,508 |
| 1890 | 16,036,043 | 7,141,656 | 1,897,815 | 1,361,622 | 891,910 |
| 1891 | 14,591,178 | 6,127,001 | 1,986,830 | 1,272,928 | 945,105 |
| 1892 | *16,296,666** | *7,543,544* | *2,312,071* | 1,084,047 | 1,255,465 |
| 1893 | 11,587,629 | 4,668,324 | 1,742,410 | 697,985 | 1,499,927 |
| 1894 | 11,879,679 | 4,419,074 | 1,493,086 | 532,087 | *2,968,463* |

This statement indicates not only a decided decrease in the quantity of iron ore mined in Pennsylvania but a still more marked decline in the proportion which the output of the Pennsylvania iron ore mines bore to the total production of the United States. These percentages were as follows:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| In 1880 | Pennsylvania | produced | 27.41 | per cent. | of the | total United States | output. |
| In 1889 | " | " | 10.75 | " | " | " | " |
| In 1890 | " | " | 8.50 | " | " | " | " |
| In 1891 | " | " | 8.72 | " | " | " | " |
| In 1892 | " | " | 6.65 | " | " | " | " |
| In 1893 | " | " | 6.02 | " | " | " | " |
| In 1894 | " | " | 4.48 | " | " | " | " |

To indicate the present positions which each state producing iron ore and smelting pig iron occupied, the following table is prepared. This shows the quantity of pig iron made and of iron ore mined in each state which contributed either in the years 1892 and 1894; 1892 is selected because in that year more iron ore was produced in the United States than in any other year, and as the amount of pig iron made was close to the maximum output of 1890; it will show by comparison with the present depression what may possibly be repeated as to the relation between ore and pig iron production in the future.

*Maxima in italics.

*Production of Iron Ore and Pig Iron in various States in 1892 and 1894.*

| States. | Gross Tons. | | | |
|---|---|---|---|---|
| | 1892. | | 1894. | |
| | Iron Ore Mined. | Pig Iron Made. | Iron Ore Mined. | Pig Iron Made. |
| Michigan, | 7,543,544 | 184,421 | 4,419,074 | 95,171 |
| Minnesota, | 1,255,465 | 14,071 | 2,968,463 | None. |
| Alabama, | 2,312,071 | 915,296 | 1,493,086 | 592,392 |
| Pennsylvania, | 1,084,047 | 4,193,805 | 532,087 | 3,370,152 |
| Virginia, | 741,027 | 342,847 | 590,562 | 298,086 |
| Wisconsin, | 790,179 | 174,961 | 347,501 | 91,595 |
| Tennessee, | 406,578 | 300,081 | 292,831 | 212,773 |
| New Jersey, | 465,455 | 87,975 | 277,483 | 63,273 |
| Colorado, | 141,769 | 32,441 | 250,199 | 73,669 |
| New York, | 891,099 | 310,395 | 242,759 | 175,185 |
| Georgia, | 185,054 | 9,950 | 172,194 | 40,268 |
| Missouri, | 118,494 | 57,020 | 81,926 | 6,522 |
| Ohio, | 95,768 | 1,221,913 | 58,493 | 900,029 |
| Kentucky, | 50,523 | 56,548 | 42,548 | 33,854 |
| Maryland, | 40,171 | 99,131 | 7,915 | 5,000 |
| Massachusetts, | 44,941 | 7,946 | 17,762 | 156 |
| Connecticut, | 31,324 | 17,107 | 12,497 | 7,416 |
| West Virginia, | 6,000 | 154,793 | 4,000 | 80,781 |
| North Carolina, | 25,379 | 2,908 | 2,500 | None. |
| Texas, | 22,903 | 8,613 | 15,361 | 4,671 |
| Montana, Oregon, New Mexico, Utah and Nevada, | 44,875 | 7,628 | 44,438 | 1,000 |
| Illinois, | None. | 949,450 | None. | 604,795 |
| Indiana, | None. | 7,700 | None. | None. |
| Total, | 16,296,666 | 9,157,000 | 11,879,679 | 6,657,388 |

It is unnecessary in this paper to refer to the corresponding increase shown by other states, but later on it will appear that the decline in position shown by Pennsylvania is not due to a restricted demand, for the production of iron having been augmented more ore is required and this has been obtained from without the state borders.

The above figures refer to quantity only, but they may be explained in part by considering quality as compared with other prominent sources of iron ore supply to show the position occupied by Pennsylvania.

In the census year 1889 an attempt was made to collect statistics of the percentage of iron in the ores used in the blast furnaces of the various states. This showed that "Pennsylvania is the largest consumer of foreign iron ores, fully 85 per cent. of the reported total of these ores being shipped into the State, and several furnaces drew their entire supply from this source, with an occasional admixture of local cinder. It is also the heaviest consumer of the Lake Superior ores, obtaining most of its red hematites from that region, which are supplemented by local ores. In addition to its liberal spuply of magnetite from the Cornwall ore hills, Dillsburg, etc., it obtains this class of ore from New York, New Jersey and the Lake Superior region. The

brown hematites are mostly obtained from local mines, although some were sent from Virginia. Some local carbonates and some from Ohio are used. Instances of dependence upon one class of ore show a yield of iron from hematites obtained from Spain and Africa of 63.6 and 60.2 per cent; from all Lake Superior ores, 61.5, 61.8, 62.6, 60.8, 60 and 59.5 per cent.; from all Pennsylvania magnetites, 51,50.9, 49.1, 48.9 and 48.5 per cent.; from Pennsylvania brown hematite, 41.5, 45.6 and 41.2 per cent.; from local fossil ores, 37.9 and 36.9 per cent., and from ore from Cuba and Mediterranean ports 56.6 per cent. of metallic iron. The average yield of iron in the ores used in the State is 55.3 per cent."

*Iron Ores in Other States.*

This may be compared with profit with similar data from other states. In the Southern district, Alabama, Tennessee and Georgia the ores used are local red and brown hematites. In Alabama 70 per cent. of the ore was red hematite, the balance being brown hematite from local mines, and from Georgia, together with a small amount of mill cinder. The average yield of the iron ores used in the blast furnaces of the State of Alabama was 44.4 per cent., the ores ranging from 30.5 to 51.6 per cent. of iron. In Georgia and North Carolina the ores used are taken from local mines, the approximate proportion being one-third brown hematite and one-half red hematite, with a small amount of magnetite and mill cinder, the average yield being 40.7 per cent. of iron.

The chief base of supply for the Tennessee furnaces is the red and brown hematites from local mines, with additions from Georgia and Alabama, together with a small quantity of carbonate ore and mill cinder, the yield for the state being 41.6 per cent. The average per cent. for furnaces using brown hematite was 38.8 per cent.

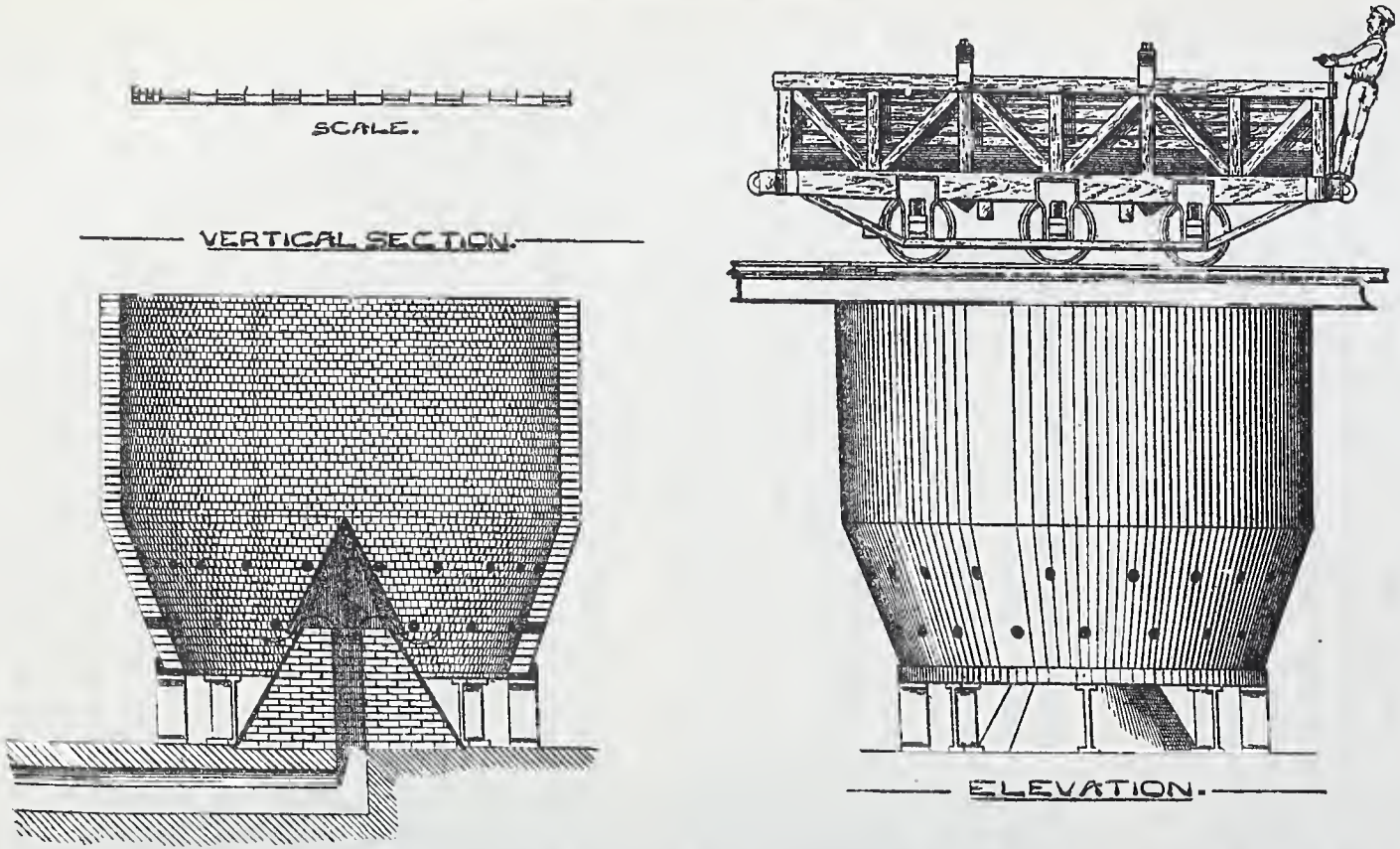
Illinois produces no iron ore, depending upon the Lake Superior district for her supply, and as would be expected the average yield is high, being 60 per cent. or more. This ore was all of the red hematite variety, there being but a small admixture of brown hematite and mill cinder.

Like Illinois, Ohio, which ranks next to Pennsylvania as a producer of iron derives most of its ore from the Lake Superior region, although some local carbonates, together with similar ores from Kentucky, red hematite from Missouri, and magnetite from New York were also utilized, the average being 56.7 per cent. of iron.

The furnaces in Michigan nearly all use charcoal for fuel and smelt as a rule, lower grade ores than can stand the charges for long transportation, the average of ores used in that state being 58 per cent. of iron. The red hematites form the bulk of supply, but some magnetite and brown hematites, all from the Lake Superior district are used.

# ORE ROASTER.

**Arranged for Filling Direct from Railroad Cars.**




These kilns which are illustrated by plate IIa consist of an iron casing lined with brick, supported on iron posts. Ore and fine coal are fed direct from railroad cars into the kiln in such proportions as to keep up combustion after the fire has been started, air for combustion being admitted from below and through openings in the sides. The operation is therefore continuous, and the results obtained are entirely due to heat which drives off about one-half of the sulphur in the ore at a cost for handling and roasting of about twenty cents per ton of ore.

Blast-furnace gas, producer gas, and gas from petroleum have also been used as fuel, but the general practice is to roast ores with coal. A more perfect elimination of sulphur is possible in kilns arranged so that after the ore is highly heated it is submitted to an oxidizing atmosphere.

The New Jersey blast furnaces use local magnetite ores, together with some from the Lake Superior district, from New York, a small amount from Pennsylvania and some foreign ores, the yield for the state being 50.9 per cent.

One-half the ores used in New York are local magnetites, over 30 per cent. were red hematite from that state, and from the Lake Superior region, the balance being brown hematite from New York and the New England states, carbonates from New York, mill cinder, etc., the average yield being 52.7 per cent. of iron.

Few brown hematite ores are used as mined, and this holds true for Pennsylvania as well as for other localities, in fact one of the material items of expense in mining brown hematite ores is in separating them from the clay, ochre and sand in which they occur. This is in part accomplished in the excavation by cleaning as much of the earthy impurities as possible from the ore body before the ore is dug, and in part by passing the ore through washers in which the mass is churned by revolving blades so as to break loose any sand or clay and carry it off by a stream of water.

As heretofore stated, the carbonate ores are roasted to drive off the carbonic acid, and sulphurous ores are treated in a similar manner to reduce the sulphur.

Nowhere else in the United States are there so many roasting kilns as at the Cornwall ore hills, and the blast furnaces which depend upon the ore from this deposit. The furnaces at Cornwall, and in the Lebanon Valley, some on the Susquehanna and Schuylkill valleys being equipped with batteries of kilns for driving off the sulphur from the ore.

Some lean magnetites are concentrated by magnetic separators, the ore being crushed to sand is passed over machines fitted with electro magnets which collect the portions of the ore which is magnetic and discard the non-magnetic materials; in this way some ores are made marketable which otherwise could not be used and this method may revive some of the Pennsylvania iron ore deposits now dormant and improve the demand for others. It is also possible by combining some deposits of minor extent under one management, utilizing approved methods for operating them, and exercising care in preparing the ores, to make some Pennsylvania mines productive which are now idle, but it is questionable if the total amount of iron ore obtained from the State will increase, and the bulk of the material smelted within its borders will continue to come from other states. Within late years Pennsylvania has produced from about one-sixth to one-tenth of the iron ores which it uses.

This statement does not take into account the artificial products referred to, such as mill cinder, roll scale and blue billy, which are used as iron ores. The only actual data as to the amount of these

used was in the census year of 1890 when 812,000 net tons were smelted in Pennsylvania blast furnaces. As mill cinder carries with it impurities which were in the iron treated, its use is considered questionable by many, but it is rich in iron, and the percentage of deleterious ingredients to the metallic contents are not in excess of what is found in some ores used. The cinder from heating and steel furnaces has less iron and also less phosphorus than mill cinder.

The extent to which these materials were used in blast furnaces will be appreciated by comparing the iron ore production of the State in 1890 with the above figures, which shows that 60 per cent. as much mill cinder, blue billy and scrap as of local ores were used. The proportion of these materials, however, to the total iron ore supply of the State in 1890 was but little over ten per cent.

## HOW PIG IRON IS PRODUCED.

Following a sketch of iron ores a discussion of the manner in which the metal is extracted from them is in order, but this will not include the early crude methods described in works upon metallurgy, for none of these were employed in Pennsylvania, all of the iron which was produced in this State having been obtained by the use of the blast furnace, by the forge or bloomery, or by later direct processes as described below.

A blast furnace is a structure from 30 to 90 feet in height, built of masonry or of metal, cylindrical, pyramidal or conical in exterior form, enclosing a core extending from the bottom to the top which is lined with refractory material. The form of this core may be approximately described as two frustra of cones, placed base to base, resting on a short vertical cylinder. This cylinder is called the "crucible" or "hearth," while the greatest diameter (from 8 to 23 feet in existing blast furnaces) where the frustra join, is known as the "bosh," and the taper of the upper frustrum receives the appellation of the "in-wall." The crucible is pierced with openings for the "tuyeres," which supply air under pressure for the combustion of fuel and also, others, known as "notches," through which the molten iron and cinder flow. The details of construction and equipment and the form of the various parts of the blast furnace as it *was* and as it *is* now built in Pennsylvania are described and illustrated in the pages which follow.

For producing pig iron, iron ores, limestone and fuel are charged from a platform at the top called the "tunnel head," into the shaft of the blast furnace structure (generally spoken of as the "stack"); while the resulting iron and cinder are drawn or "tapped" from their respective notches near the bottom of the crucible.

The product of the furnace is cast iron, recognized in this country and elsewhere as "pig iron," but in some European countries it is

called "ingot" iron. A pig of iron is from three to four feet in length and about two and a half by four inches cross section, weighing, approximately, 100 pounds.

### *Smelting Iron Ores.*

The process of producing iron in a blast furnace may be stated in a general way thus: The iron ore which contains the metal in the form of an oxide, is "reduced" in the furnace by carbonic oxide gas, the earthy gangue being fluxed off by the limestone as cinder or slag. the combustion of the fuel in the crucible or hearth of the blast furnace supplying the heat and reducing gases necessary for the process of "smelting" the ores. The ores are not melted, in fact, some iron ores will withstand intense temperatures, it is the metal which is melted after the oxide of iron has been "reduced," so as to separate the iron from the oxygen. The whole process of reduction and melting is recognized as "smelting."

The smelting of iron ores is, therefore, a chemical process, the oxygen of the air supplied to the furnace by the blowing apparatus, uniting with the carbon of the fuel attacks the iron ores whose metallic iron is thus freed, the earthy portion of the ore and the ash of the fuel being made fusible and converted into slag by the addition of lime from the limestone. The proportions of these solid ingredients charged into a blast furnace varies with the following limits:

| | | | | |
|---|---|---|---|---|
| From 18 to 40 | parts | by | weight of | fuel. |
| " 33 " 68 | " | | " | prepared iron ore. |
| " 2 " 30 | " | | " | limestone. |

This range in quantities covers practically the best and the poorest results obtained at Pennsylvania blast furnaces; there may be short intervals where the minima may be reduced by a combination of favorable circumstances, or the maxima may be similarly increased by a conjunction of unfavorable conditions, but the above figures are offered as the limits now attained in good practice with excellent facilities, and certainly the extreme figures at which inferior plants or management can be tolerated.

In addition, the quantity of air which is driven into the furnace crucible through the tuyeres to maintain the combustion of the fuel will represent a weight in excess of the aggregate of the solid constituents, but the quantity is so varying that limits can hardly be mentioned. In computing the air required, volume is the standard used, and the number of cubic feet per minute and not the pounds or tons is generally specified (see Warwick furnace record).

The older blast furnace stacks were massive masonry structures held together by wooden braces or iron rods, the lining being of slate and sandstone, but later constructions are of iron inclosing and supporting fire brick linings.

Illustrations exhibiting the general form and construction of the old furnaces and the more prominent steps by which the present shape, size and arrangement were reached are given in the pages following, and it is of interest to note that on the list of active blast furnaces there are now in Pennsylvania samples of all the general forms shown.

### *Forges, Etc.*

The first iron works in Pennsylvania was undoubtedly a forge, or bloomary, terms which have been practically interchangeable, although present custom recognizes such works as Rutter's original forge as bloomaries.

A bloomary may be described as an open fire place or several such fire places in one building, each provided with a chimney or draught stack and connected with apparatus for supplying air under pressure to facilitate combustion. Into this fire place charcoal is fed, and on the bed of coal ore is gradually added, the spongy mass being worked into a ball, and when the ball, or "loupe," is completed, it is placed under a hammer to compact the mass into a "bloom" and remove the cinder. The "bloom" being crude iron is returned to the fire for further refining and subsequent hammering.

A few such direct process bloomaries are still on the list of active iron works in New York and Tennessee, but the wastefulness and cost of the indifferent processes has relegated them to the past, they have been but little used in Pennsylvania.

A forge fire is somewhat similar in general form to a bloomary fire, but its function is to refine and agglomerate metal, not to treat ore, the pig iron obtained from blast furnaces, scrap, cast or wrought iron being melted in the charcoal fire "brought to nature" and balled into a "loupe" which, in turn, is hammered into a bloom. Pennsylvania supported numerous forge fires and some are still active.

In the early history of the iron industry of Pennsylvania a blast furnace supplied from four to six such forges with pig metal. As, however, this monograph is to treat of the "manufacture of pig iron in Pennsylvania," further attention need not be given to the process of producing iron from ore in bloomary fires, and the use of pig iron in forges will be only mentioned as incidental to the development of iron manufacture.

Mere mention need only be made of the other methods of obtaining metal from iron ore, which are recognized under the term of direct process, for although large amounts of money have been expended upon numerous experimental plants, the results have with but few exceptions been commercially unsuccessful. These direct processes were principally attempts to produce wrought or malleable iron from the ore by mixing iron ore and carbon in a finely divided state

LAUREL FORGE, PINE GROVE FURNACE.

and submitting the mass to a temperature which would permit of reduction. At most of these forges the pig iron coming from the blast furnace was melted in a "finery," or "run-out," fire previous to being put in the forge fire. The view of Laurel Forge, Cumberland county, Pennsylvania, shows one of the few remaining forges in the State and exhibits the run-out and the forge buildings, also the charcoal store houses.

Practically all wrought iron or steel is now made from iron which has been obtained from blast furnaces; although it does not all assume the form of pig iron, a considerable amount being treated in the molten state as it comes from the blast furnaces.

## HISTORICAL.

The pig iron industry of Pennsylvania has a record of but 175 years for, although there is reason to believe that iron was produced in this State as early as 1692, the first authentic statement is of a forge erected in Eastern Pennsylvania near Pottstown, in 1716. The earliest known production of pig iron, however, was at the Colebrookdale blast furnace, eight miles from Pottstown, in 1720.

In view of the knowledge that ore was shipped from and iron works erected over a century before in Virginia (the latter, however, was destroyed by an Indian raid), that pig and wrought iron were produced in Massachusetts in 1645, in Connecticut in 1658, in Rhode Island in 1675 and in New Jersey in 1674, Pennsylvania cannot be considered as a pioneer although it has for many years been the largest producer and manufacturer of iron and steel. A country of which the record of iron ore mining covers but little over three centuries and in which the manufacture of iron in any form has been practically carried on for but 250 years, may not have a metallurgical history comparable with that of other nations, and a state which produced no iron until 1716 may be considered as a junior among some of the European iron manufacturing districts. But there is much to interest in the steps by which the iron industry, particularly that of Pennsylvania has grown to its present enormous proportions, and the records of some of the older plants abound in quaint, entertaining and instructive data.

The history of iron manufacture in Pennsylvania is given in interesting detail by Mr. James M. Swank in his most excellent work on "Iron in All Ages," to which the readers of this article are referred, and the historical details will, therefore, be mentioned only as a brief resume except as they are incidental to the record of progress or as the development of prominent works is considered.

The early iron industry of Pennsylvania developed rapidly in the southeastern portion of the State and the flames from the open tunnel heads of blast furnaces or from stacks of forge fires, indicated

at night the location of a number of these improvements. While in daylight heavy wagons, drawn by oxen and horses, loaded with iron ore, limestone, charcoal or with pig or manufactured iron demonstrated that the industry was active over a considerable territory in what is now Montgomery, Berks, Bucks, Chester, Lebanon, Lancaster and Cumberland counties.

Mr. Swank states: "In 1728 James Logan wrote that 'there are four furnaces in blast in the colony.' Colebrookdale and Durham were two of these, but the names of the others are in doubt." * *

"The iron industry of Pennsylvania may be said to have been fairly established on a firm foundation at this time. In 1728-29 the colony exported 274 tons of pig iron to the mother country."

*Eastern Pennsylvania.*

In an address at the Schuylkill Valley meeting of the American Institute of Mining Engineers in October, 1892, upon the "Industries of the Schuylkill Valley," Mr. John Birkinbine, president, said:

"One who stood 170 years ago on the summit of this Neversink mountain might have noticed in the daytime the smoke, or at night the reflection, from the fires of the first successful Pennsylvania iron enterprises, scarcely 15 miles to the south and in the two decades following 1720 a number of furnaces and forges were located where they would be distinctly visible from the Neversink mountain.

"We may, in imagination, look back to the time when the Schuylkill valley, now teeming with industries, traversed by railways and covered with population, was sparsely inhabited by settlers who had made scattered clearings in the wooded area, and picture to ourselves the pioneer iron manufacturers, struggling with the difficulties attendant upon an initial enterprise. We can almost hear the melancholy groan of the great bellows, receiving its power from a slowly-moving water wheel, or the thud of the trip-hammer as it pounded the loupe or bloom, and see the numerous teams bringing charcoal and ore, or hauling away pigs, blooms or bars. As the shifting scene approaches the present era, the forests disappear before the axe and cultivated fields replace the woodlands, in the diminishing area of which colliers are converting the wood into charcoal to supply the iron works; new mines are opened to meet the increasing demand for raw material; towns grow up into industrial centers; and a canal system is established as a convenient method of transportation. Although this development appeared rapid at that time, it was only with in the past half-century that greater strides were taken. The Schuylkill valley boasts of one of the earliest extensive railroad systems; and nearly simultaneously with the employment of this method of transportation came the liberal exploitation of the coal fields, the use of mineral fuel, the

application of hot-blast, and the utilization of steam power at iron works. Great as these changes were, they have been surpassed in turn by the history of the last twenty years, in which technical investigation has aided practical skill in obtaining better and larger results than had been believed to be possible.

"The resources of the Schuylkill valley appear to be far beyond danger of exhaustion, even by its annual production, approximating 12,000,000 tons of anthracite, 600,000 tons of pig iron, and a greater amount of rolled iron and steel, much of which is converted locally into machinery, bridges, roofs, stoves, hardware and other manufactures."

The production of iron in Eastern Pennsylvania was greatly stimulated by the development of the Cornwall ore hills (six miles south of the present city of Lebanon), and for over a century and a half blast furnaces have been in operation at and within convenient distances from this unique deposit of magnetic iron ore, drawing their supply of material from it. The original furnace erected in 1742 (although considerably altered) is still maintained by its owners, and was in operation up to 1887. A monograph upon "Pig Iron Manufacture in Pennsylvania," would be incomplete without reference to the Cornwall ore hills, for the immense quantity of available ore, and the cheapness with which it is mined have given it a place among the great mines of the world. In the year 1893 no single iron ore mining plant in the United States exceeded the output of the Cornwall hills, viz, 439,705 long tons, and yet the quantity named was small when compared with its maximum output of 769,020 gross tons in 1889. As far as the records can be traced this deposit up to the close of the year 1894 has supplied thirteen million gross tons of iron ore, but owing to the increase in blast furnace capacity over one-half of this was taken out within the past eleven years.

The Cornwall ore, as it has been mined, is not as rich in iron as the average of the iron ores used in the United States, about 210 to 215 tons of the ore being necessary to produce 100 tons of pig iron, and it carries on the average about 2.5 per cent. of sulphur, requiring preliminary roasting of the ore in kilns to remove part of this and an excess of lime in the blast furnace to eliminate the remainder. It also has a modicum of copper which makes the metal produced from it troublesome in some subsequent metallurgical purposes. These drawbacks have been materially discounted by improved methods and they are offset by an advantage due to the unusually small amount of phosphorus found in the ore, which makes the metal desirable for the production of Bessemer steel. In fact, the quantity of ore which can be taken from the Cornwall ore hills, the small cost of obtaining it (the operations being entirely by open quarry) and its adaptability for the Bessemer steel process will

keep it at the fore-front in the pig iron industry of Eastern Pennsylvania. Until 1894, this immensely valuable property remained in the possession of descendants of Peter Grubb, who originally developed it, and Robert Coleman, who became part owner in 1785, subsequently securing a five-sixths interest; but in 1894 the first transfer of an interest in the Cornwall ore hills to anyone outside of the two families named gave a public indication of the money value of the deposit as a future source of iron ore, at approximately thirteen million dollars. Less than a one-sixth interest having been purchased for the sum of $2,100,000 by the Lackawanna Steel and Iron Company. This deposit has brought wealth to most of those interested and dissensions among owners or adjudication of claims of others have supplied liberal amounts for attorneys' fees and court costs. It has also contributed large sums annually to railroads carrying its ore or iron made from its ores to points of consumption, or bringing fuel and flux to the blast furnaces which rely upon it.

At present about fifteen per cent. of the annual output is taken out under a reservation made in 1785 which provides for a perpetual supply of ore to one furnace.

The view of the Cornwall Ore Hills represents some of the immense faces of ore exposed by exploitation. The tracks of the railroad shown are laid on iron ore, and the cut is through ore, in fact for practical purposes the Cornwall Ore Hills may be considered as a great mass of iron ore confined on the north by a trap dyke, but possibly extending under the sandstone of the South Mountain. Borings indicate that besides forming the hills the ore fills a large saucer shaped area which has been explored by diamond drills from 200 to 300 below the creek level. The ore is shaken up by blasting, then broken by sledge hammers and shoveled direct from the face into cars. The roasting kilns are used liberally at the blast furnaces located in the vicinity depending in whole or in part on Cornwall ore.

Although Pennsylvania did not enter the list of the earlier producers of iron, its development was rapid for, by 1750 it "was the most advanced of all the colonies in the manufacture of iron."

From the Schuylkill valley the iron industry extended to the Delaware, Susquehanna and Juniata valleys. Pig iron was also produced in Western Pennsylvania (Fayette county) and one experiment in Allegheny county was made before the close of the eighteenth century. Statistics of Manufacture, Tenth Census, page 824, says, that in 1791 there were sixteen furnaces and thirty-seven forges in Pennsylvania. No pig metal was smelted in the Lehigh valley or on the Upper Susquehanna river until after the year 1800, the early development being influenced by convenience to known deposits of iron ore and to available markets for the product. The initial enterprises in

PORTION OF CORNWALL ORE HILLS.

Ruins of the First Furnace West of the Alleghany Mountains.

this State and in New Jersey differed from those of the New England states, for the Pennsylvania pioneers located their plants near by deposits of magnetite, while in the other states mentioned bog ore or other forms of brown hematites were relied upon as sources of supply.

### *Western Pennsylvania.*

The pioneer blast furnace erected in Pennsylvania west of the Allegheny mountains was in what is now recognized as the Connellsville region, from whence the great smelting plants of Pittsburgh, Western Pennsylvania, Eastern Ohio and Illinois draw their supplies of metallurgical fuel. In presenting a view of the ruins of this pioneer furnace, Mr. James B. Laux writes in the Pittsburgh Dispatch:

"The first furnace and forge built west of the Allegheny mountains was located on Jacob's creek, a mile or more above its junction with the Youghiogheny river. It was blown in on November 1, 1790, and was called the Alliance Iron Works. There is attached to these ruins a manifold interest. They not only represent the industries of the early days of the Republic, but they help us, when we look upon them, to realize the gigantic strides that have been made in a century. We smile when we recall the fact that Pittsburgh, the Iron City, once give up the manufacture of iron in despair. The first furnace in Allegheny county was built at Shadyside, in 1792, and was abandoned in 1794, because no ore could be found in the vicinity, and the expense of hauling it from distant points was too great. The ruins of this interesting landmark were visible up to 1850.

"At the beginning of the century, Fayette county was the center of the iron industry west of the Allegheny mountains. For several decades Pittsburgh, the Ohio and Mississipi valleys were almost wholly suplied by Fayette county with all kinds of castings and hammered bar iron. It had at one time twenty furnaces, eight forges, three rolling mills and slitting mills, one steel furnace and five trip hammers. Fayette county enjoys the enviable distinction of having built the first rolling mill in the United States to puddle iron and roll iron bars as well as having built the first nail factory west of the Allegheny mountains. Union furnace on Dunbar creek four miles south of Connellsville, went into blast in March 1791. It was replaced in 1793 by a larger furnace, which bore the same name.

"In 1797 Fairfield furnace was built on George's creek. This furnace is invested with historic interest from the fact that some of the cannon balls used by General Jackson at the battle of New Orleans were cast here. They were shipped by raft down the Monongahela, Ohio and Mississippi rivers.

"In 1792 the Westmoreland furnace, the first furnace in Westmore-

land county, was built, it was abandoned with the forge, about the year 1810.

"The principal products of these old furnaces were hollow ware, such as Dutch ovens, stoves, sugar kettles, skillets, pots, as well as grates, irons and plow castings. The early Westmoreland county furnaces in addition to supplying local wants, shipped castings on boats and arks on the Youghiogheny, the Conemaugh and Allegheny rivers to Pittsburgh, much of which eventually went down to the Ohio to Cincinnati, Louisville and New Orleans.

"Much of the iron made in the then far off Juniata valley in its palmy days was sold at Pittsburgh, first in the form of castings and afterwards in pigs and bars, finally almost wholly in blooms.

"The Juniata valley iron was also largely sold in Eastern markets, which were reached by floating down the Juniata and Susquehanna rivers. The building of the Pennsylvania canal subsequently simplified the manner of transportation amazingly."

The foregoing indicates that the development of the pig iron industry for the first 80 years of its history caused it to spread over much of the area of the State, but although the number of plants increased, their total output was small as will be seen from an examination of the following table.

In the early history there was many failures and quite a number of blast furnaces, forges, etc., had but a short life due to errors in location, shortage of satisfactory ores, etc. Some of the enterprises did not run for more than a year, others made a few blasts and succumbed.

The following is excerpted from "A Concise History of the Iron Manufacture of the American Colonies up to the revolution and of Pennsylvania until the present time," by John B. Pearse, A. M., and published in Philadelphia in 1876.

*Statistics of the Iron Trade of Pennsylvania from the Earliest Times.*

1730.

Four furnaces (Logan 1728) estimated product 1072 tons of pig iron.

Nine forges and two bloomaries (Swedenborg, 1734), estimated 300 tons bar iron.

1751.

Six furnaces, estimated 2,500 tons pig iron.

Seven forges (Governor Denny) official 526 tons bar iron.

1759.

Twelve furnaces (Acrelius) estimated 5,000 tons pig iron.

Twelve forges and one bloomary (Acrelius) estimated 975 tons bar iron.

1780.

Seventeen furnaces (Hasenclever) estimated 6,000 tons pig iron.
Twenty-five forges (Hasenclever) estimated 2,700 tons bar iron.
Two steel works (blister) estimated 150 tons steel.

1789.

Fourteen furnaces (Potts) 5,150 tons pig iron, 1,000 tons castings.
Thirty-four forges (Potts) 3,600 tons bar iron.

1797.

Sixteen furnaces in operation (Ebeling) estimated 7,500 tons pig iron.

Thirty-seven forges in operation (Ebeling) estimated 4,200 tons bar iron.

"Between 1788 and 1794 half as many works were started as there were works before 1788" (Coxe, View).

While the above figures are not entirely reliable they are the best obtainable and were collected from records and represent diligent research, the authorities appearing in brackets. The number of forges is introduced to show that the utilization of the iron produced, was accompanied by a gradual increase in the quantity which was converted into wrought iron and steel.

*The Old Furnaces and Their Managers.*

Among the Pennsylvania blast furnaces active before the close of the Eighteenth century were Colebrookdale, Durham, Warwick, Cornwall, Reading (or Redding) Oley, Hopewell, Elizabeth, Martic, Pine Grove, Conewago, Codorus, Boiling Springs, Holly, Bedford, Huntingdon, Hope, Alliance, Union, Anshutz, etc.

Prominent among the iron masters who built or operated these plants appear the names of Rutter, Potts, Nutt, Branson, Grubb, Morris, Allen, Coleman, Bird, Old, Ross, Stiegel, Turner, Logan, Ege, Patton, Miles, Lewis, Turnbull, Marmie, Halker, Meason, etc.

The iron industry is still or has lately been carried on in altered or modern blast furnace plants combining parts of the original structures of Cornwall and Pine Grove stacks. Active furnaces are located on or close to the original sites occupied by those bearing the names of Durham and Boiling Springs, and new industries have kept alive the names of Colebrooke, Warwick, etc., while Birdsboro, Pottsville, Pottstown, etc., recall the names of some of the men who took the initiative in establishing iron works in Pennsylvania. Descendants of the pioneers in iron production in Pennsylvania still continue in this specialty, and a number of the names quoted above are familiar to the trade to-day. Other persons could be referred to who although active in the development of the iron industry of

the State are not recorded as specially engaged in the manufacture of pig iron, but were customers of the blast furnaces, and converted the pig metal into merchantable shapes in forges, slitting and rolling mills.

Blast furnaces gradually scattered over nearly all of the State and in 1810 the iron industry of Pennsylvania was reported to embrace forty-four blast furnaces, seventy-eight forges, four bloomaries, eighteen rolling and slitting mills, six air furnaces, fifty-nine trip hammer, five steel furnaces and 175 naileries, the blast furnaces producing 26,878 tons of pig iron or cast iron.

In 1840 the number of furnaces in Pennsylvania increased to 213 and in 1850 to 298.

The wide distribution and the number of blast furnaces suggested by the above must be considered in connection with the statement made concerning the number of failures among the early enterprises. As the State became settled the demands for timber increased, and quite a number of blast furnaces found after a short life that the fuel supply within convenient distances was insufficient or too costly. Other furnaces erected to smelt local ores were abandoned because the quantity of ore was not what was expected or because the metal produced from it was not such as could be used or sold. Others had to give way to plants located where the transportation facilities offered an advantage in carrying the product to market. In those times when the furnace manager had to determine this by actual trial the chances for failure were numerous, but on the other hand the wisdom of the old iron masters who selected the sites for some of the pioneer blast furnaces is shown by the maintenance of iron industries in the location chosen for a century or more, and some of these sites are so occupied to-day by important iron and steel works. These facts cannot but impress the reader with the ability and skill which characterized the iron masters who penetrated the wilderness to seek out a blast furnace site, where abundant and continuous supplies of wood and ore and ample water power could be had, selecting a location which admitted of reaching a market without prohibitory transportation charges. The erection of the works itself was no small effort in the days when manual labor fabricated all machinery, handled and prepared materials, and where the only traction power was the ox or the horse.

## THE THREE ERAS OF PIG IRON PRODUCTION.

The development of the pig iron industry in Pennsylvania may with propriety be considered as divided into eras, the first confined to the time during which charcoal was the only fuel used; the second embracing the application of mineral fuel to the smelting of iron, the construction of enlarged blast furnaces and

the employment of steam for power and of heated blast, the third covering the period of technical investigation of the blast furnace process, the construction of the great furnaces of the present day, and the appreciation of the chemistry of blast furnace phenomena.

There have been minor sub-divisions of these eras (if they may be so-called) some of which may demand attention later, but in this paper the manufacture of pig iron will be divided into the three general eras mentioned which will be designated as

The Charcoal Era,
The Era of Development and
The Technical Era.

The first of these sub-divisions will embrace the period prior to 1840, the second between 1840 and 1876, and the third from 1876 to the present time. Such division cannot be made exact, as many features of practice are common to two or more of the eras, but the arrangement proposed will separate general data by marking the dates which are prominent; for 1840 may be fairly taken as the year when the employment of mineral fuel in blast furnaces was recognized as practical. Similarly 1876 although not the beginning of the application of technical knowledge to blast furnace operation was emphasized by a greater appreciation of this due to the Centennial Exposition at Philadelphia.

In view of what has been said regarding the progress made prior to 1840 and the conclusions arrived at in the pages which follow it will be noted that the division into eras, while not exact may be considered as equitable. All of the development was not later than 1840, nor was the application of chemistry to the smelting of iron ores confined to the years subsequent to 1876, but the greater part of the development, and the most pronounced technical progress belongs to the years embraced in the respective eras.

## THE CHARCOAL ERA.

Until the year 1840 practically all of the pig iron made in Pennsylvania and elsewhere in the United States was produced in blast furnaces using charcoal as fuel, the employment of mineral fuel either as bituminous or anthracite coal having been confined to some empirical campaigns up to that date, and in this State where the use of mineral fuel grew more rapidly than elsewhere a larger amount of pig iron was made with charcoal than with mineral fuel until about 1854.

Charcoal was in fact the only fuel employed in metallurgial purposes until the introduction of bituminous coal into blast furnaces in England in 1735, but in that country the mineral fuel was only employed because the demands for charcoal had so depleted the supply of available wood as to make it necessary to find some substitute.

With the abundance of forests in Pennsylvania and in the eastern portion of the United States, there was an ample supply of charcoal in the earlier part of the present century, but the wasteful methods employed rapidly denuded districts in which iron works were numerous, and caused the industry to scatter so that prior to 1840 wood for charcoal was scarce in some portions of the State.

(A comparison of the characteristics of different fuels used in the production of pig iron is made in this paper under the caption of the Era of Development).

Reliable consecutive statistics of pig iron production by different fuels from 1854 to the present time are published, and these give the quantities of iron produced with charcoal, bituminous coal and anthracite coal in the United States, but do not divide the output by States, except from 1872 to date (See graphical chart page 109). These tables show that up to 1855 more pig iron was made in the United States with charcoal than with anthracite coal, and that the metal smelted with bituminous coal and coke did not exceed that made with charcoal until 1869. The recorded product of Pennsylvania iron works for intervals between 1800 and 1841 is shown by further excerpts from the statement prepared by Mr. Pearce in which the authorities for these statistics are also given.

*Statistics of the Iron Trade of Pennsylvania.*

1820.

Mitchell, 21,350 tons bar iron.

1827.

Mitchell, 47,075 tons pig iron.

Mitchell, 21,800 tons bar iron.

"As many forges in 1820 as in 1827, and 450 tons more bar iron made in 1827 than in 1820" (Mitchell).

1828

Forty-four furnaces (Committee Pa. House Rep.) 24,822 tons pig iron, 3,698 tons casting.

Seventy-eight forges and rolling mills (French), under-estimated.

1829.

Forty-four furnaces (Co. Pa. House Rep.), 27,525 tons pig iron. 4,564 tons castings.

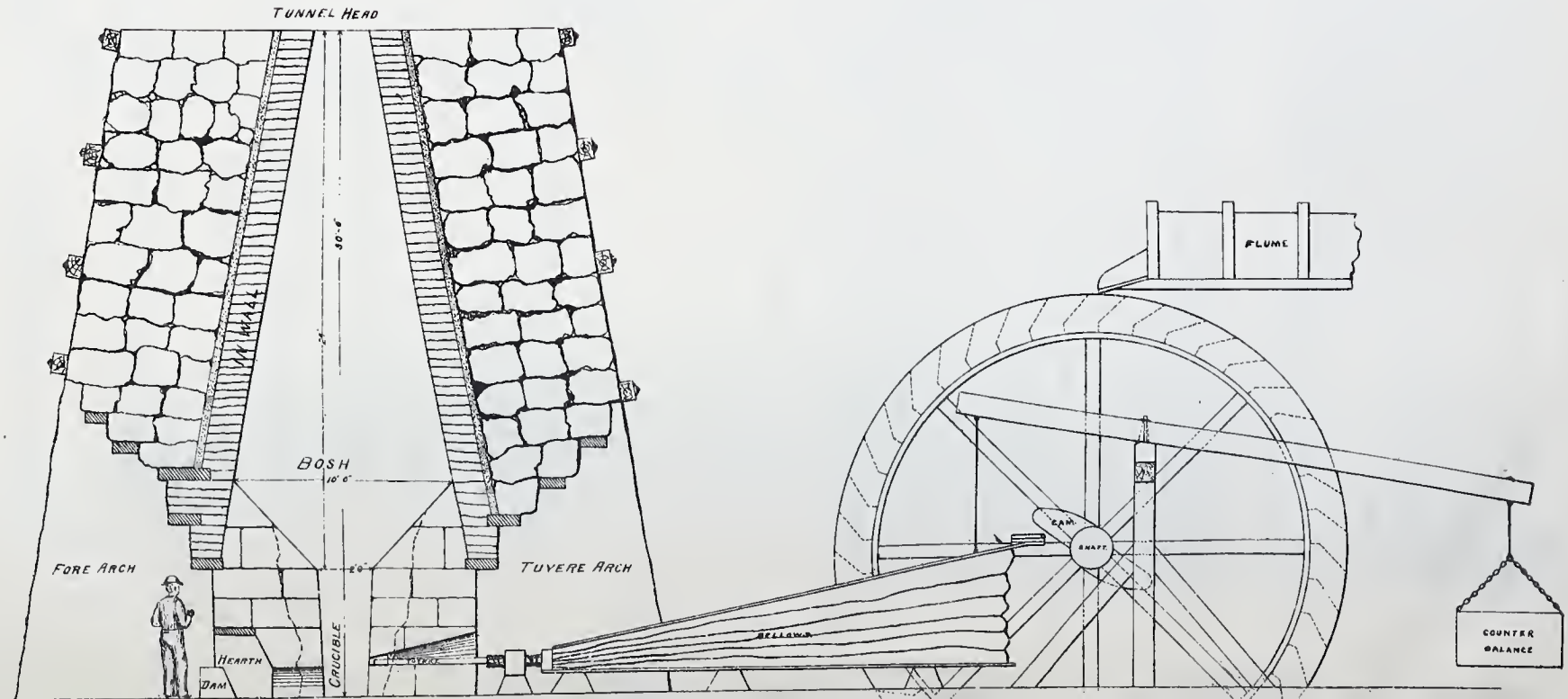
Eighty-four forges and rolling mills (French), under-estimated.

1830.

Forty-five furnaces (Co. Pa. House Rep.), 31,056 tons pig iron, 5,706 tons castings under-estimated.

1839.

(Returns of county commissioners in Pennsylvania State Journal, also Hunt's Merch. Mag., MacGregor, Chambers).

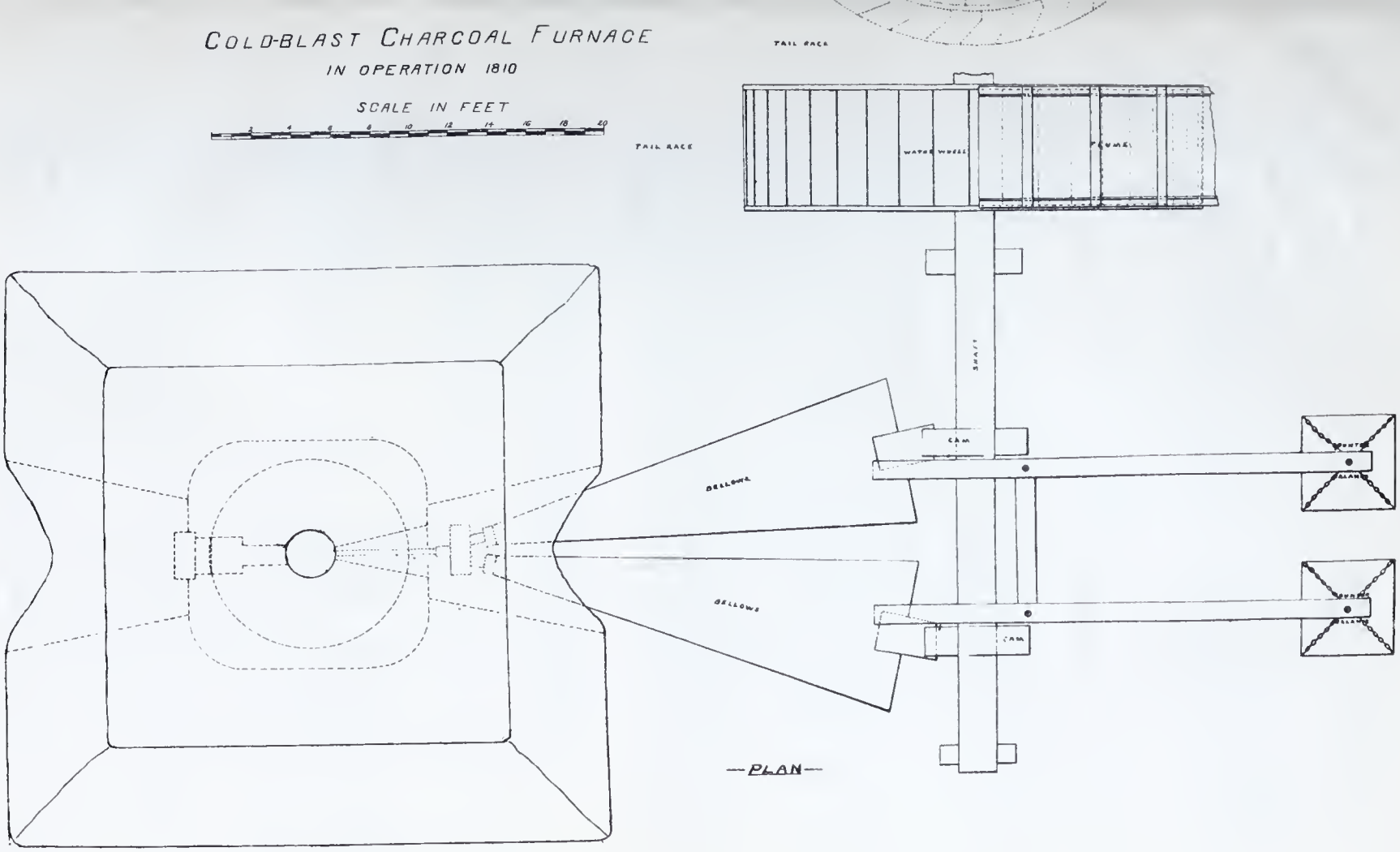

TUNNEL HEAD
30'-0"
BOSH
10'-0"
20"
FORE ARCH
TUYERE ARCH
HEARTH
DAM
CRUCIBLE
BELLOWS
CAM
SHAFT
FLUME
COUNTER BALANCE

# COLD-BLAST CHARCOAL FURNACE

IN OPERATION 1810

SCALE IN FEET



Two hundred and thirteen furnaces, 190,000 tons pig iron.

One hundred and thirty-five forges, rolling mills, nail works, etc., 120,300 tons bar iron plate, blooms, etc.

"There were 506,724 tons of ore mined in the State to produce the 190,000 tons product, estimated from actual returns of 699 townships. The ore yielded thirty-seven and one-half per cent. or one tons of pig iron to two and three-fourths tons of ore."

1841.

Two hundred and thirty furnaces (Philadelphia Committee), 194,580 tons.

(Of these twelve were anthracite furnaces, making 15,000 tons (H. K. Strong, 1842) and one coke furnace (Karthaus) not in operation).

One hundred and sixty forges, rolling mills and nail works, 70,040 tons."

Comparing these figures with those prior to 1800 a material increase in the total product of blast furnaces and also an augmented output from forges is shown. There is also indicated an enlarged average production per furnace by dividing the total output by the number of furnaces.

The nearest complete contemporaneous record to the year 1840 which is preserved is a table copied from the "Documents relating to the Manufacture of Iron in Pennsylvania," published on behalf of the convention of iron masters held in Philadelphia, December 20, 1849, it is as follows:

*Production of Iron from Ore in Pennsylvania.*

| Blast furnaces using. | Number of works. | Investment. | Capacity 1849. | Made in 1847. | Made in 1849. |
|---|---|---|---|---|---|
| | | | *Tons.* | *Tons.* | *Tons.* |
| Anthracite coal, | 57 | $3,221,000 | 221,400 | 151,331 | 109,168 |
| Bituminous coal, | 7 | 223,000 | 12,600 | 7,800 | 4,900 |
| Coke, | 4 | 800,000 | 12,000 | 10,000 | None. |
| Charcoal, hot blast, | 85 | 3,478,500 | 130,705 | 94,519 | 58,302 |
| Charcoal, cold blast, | 145 | 5,170,376 | 173,654 | 125,155 | 80,665 |
| Bloomaries, | 6 | 28,700 | 600 | 545 | 335 |
| Totals, | 304 | $12,921,576 | 550,959 | 389,350 | 253,370 |

Note.—These tons were probably the gross ton of 2240 pounds.

The introduction of railroad transportation, the use of hot blast stoves to heat the air driven into a blast furnace and the application of steam as a motive power for the blowing apparatus, were nearly contemporaneous with the employment of mineral coal for smelting iron ores; consequently the changes in blast furnace construction and operation between 1720 and 1840 were comparatively few, consisting mainly in enlarging moderately the stack dimensions, strength-

ening structures, substituting barrows for hand baskets and boxes, increasing the capacity of blowing machinery and augmenting the output of metal per furnace. However up to 1840 a furnace stack which produced fifty tons of pig iron per week was a cause of remark, and as new campaigns of blast furnaces were generally commenced in the Spring of each year the small output per plant can be appreciated.

An illustration is given of a sectional elevation and plan of a cold blast charcoal blast furnace as it was operated in the year 1810, and represents the general features of the blast furnace of Pennsylvania in use at that time.

The stack built of large stones was secured by wooden beams and iron bolts, the slate inwall being supported from a ring wall and from iron sows built in the masonry walls. The furnace was blown by one open tuyere, blast being supplied from a pair of large leather bellows. The view shows the bellows directly connected to the tuyere, but ordinarily a wind box was placed between these. Water from the flume was discharged into the buckets of the water wheel, which in revolving moved cams, secured upon its main shaft, the cams engaging with tappets forced the air out of the bellows and when these tappets were released the bellows were extended by counter balances and levers.

In operating the furnace, charcoal, ore, limestone and sometimes clay were fed into the tunnel head. After the furnace had been in blast some time the sandstone inclosing the crucible and boshes was cut away, as shown by dotted lines, and a campaign closed after from eight to ten months operations. The molten iron flowed in a forehearth which in the illustration was shorter than those commonly used.

*Construction and Operation of Cold Blast Charcoal Furnaces.*

A description of a blast furnace in operation prior to 1840 would include a stack closely approximating in design, size and arrangement that shown by the illustration, but the blowing apparatus varied in different years from the form illustrated; either horizontal or vertical wooden "blowing tubs" being substituted for "bellows," although the term "bellows" was retained, and generally used to indicate the blast producting appliances whatever its form. The earlier blowing tubs were constructed of wood, either as cylinders, or of a square section with corners filletted, but later as machine tools of sufficient power were perfected to bore larger iron cylinders, these were employed. One arrangement of wooden tubs which met with favor is shown on page 25, the blast being generated in the two side cylinders and discharged into the third in which a weighted piston gave the desired pressure.

Wooden Blast Cylinders Operated by Water Wheel.

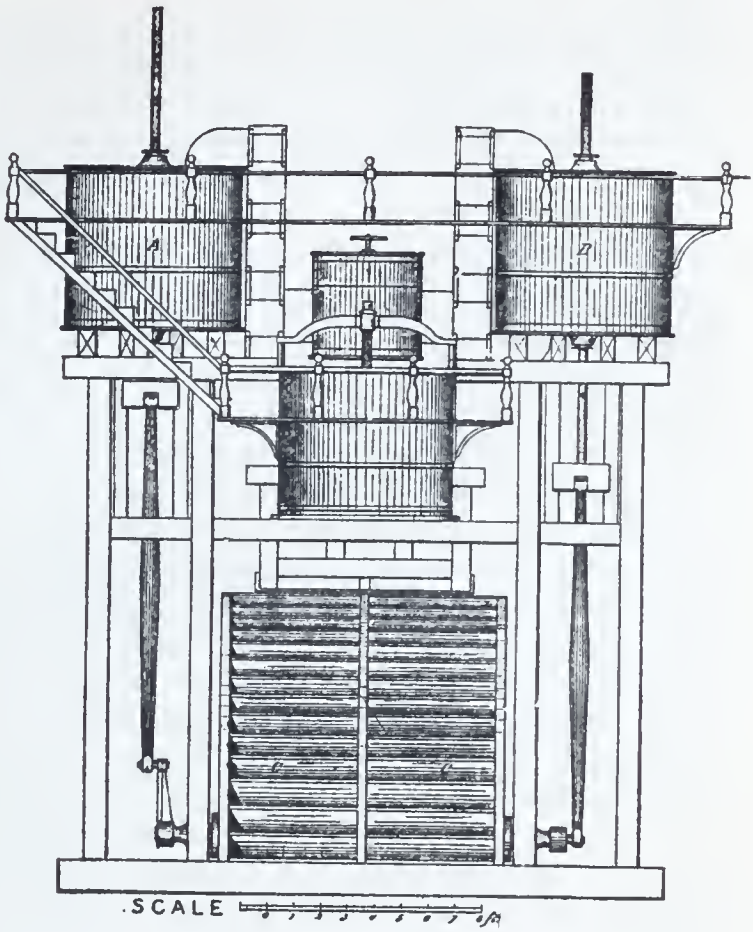



*Fig. B.*

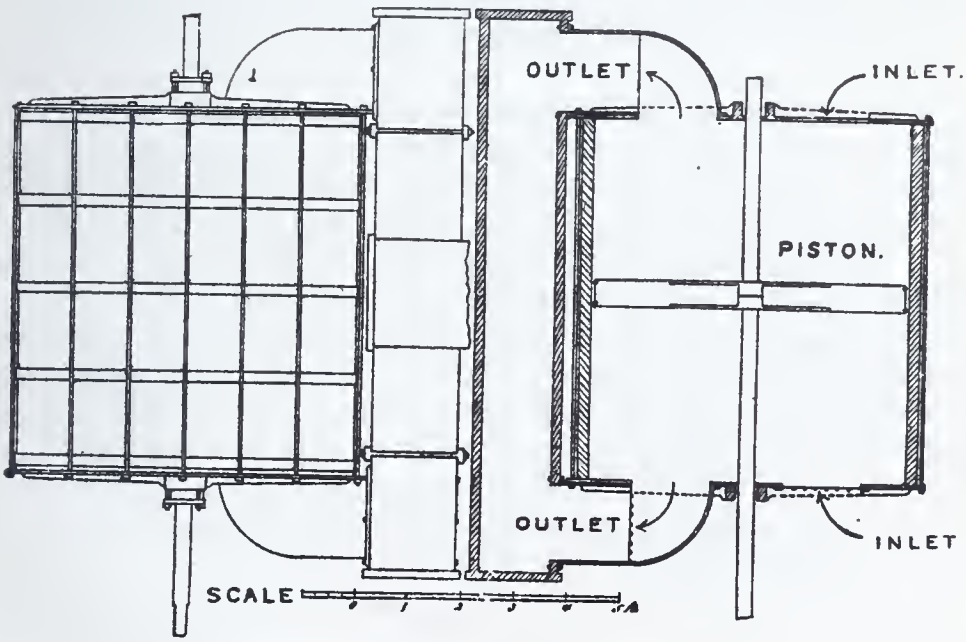



*Fig. C.*

**BLAST CYLINDER.**

The following description of a blast furnace as it was constructed in 1810 will in connection with the elevation and plan (page 24) give a general idea of the structures in use at that date, and omitting the bellows it shows the general form and proportions of most of the Pennsylvania stacks active up to 1840.

## DESCRIPTION OF A COLD BLAST CHARCOAL FURNACE.

The furnace was located close to a creek having sufficient fall and volume to generate power, and by the side of steeply sloping ground which was partially excavated to give room for the furnace stack and buildings, and yet have the former sufficiently near to the elevated ground to be connected by a bridge.

A dam across the creek above the furnace diverted the water into a race-way which connected with a flume leading to an overshot or high breast water wheel making from two to six revolutions per minute. Cams upon the shaft of the water wheels moved large bellows, some of them twenty feet in length and constructed either of folding leather sides or of two triangular wooden boxes which moved one with the other. The bellows, or later the blowing tubs, receiving motion from the water wheel supplied air to the crucible of the blast furnace through an open tuyere, at a pressure approximating one-half pound per square inch.

The furnace stack was constructed of rough masonry bound on the outside with heavy wooden beams united by bolts, the exterior form being a truncated pyramid, built about a circular core. Near the base of the masonry two openings (either opposite or at right angles to each other) connected with this core, the openings being known as the "fore arch" or working arch and the "tuyere" arch respectively.

After the masonry was completed an inwall of slabs of slate or other refractory stone was built upon iron plates carried on a "ring wall" or upon iron "sows" walled in the masonry; this inwall was circular in form, tapering toward the top and was separated from the stack masonry by clay or sand backing to permit of expansion.

The next step was to put in a bottom or hearth, and build up the crucible and bosh walls to join the inwall. The furnace hearths were constructed of dressed blocks of sandstone neatly jointed to form a solid mass of masonry; on this floor, blocks of similar material were hewn and laid so as to furnish a substantial air tight wall about the core which represented the crucible and bosh slopes. This masonry, abutting against the truncated pyramidal stone work forming the stack, was prevented from moving by expansion, iron bars, also supplemented these jambs to secure the exposed part of the crucible walls.

The crucible was ordinarily made say twenty-one to twenty-four

inches square at the bottom and twenty-four to thirty inches square at the top, the height being from five to seven feet. From the top of the crucible, the slopes to the bosh or greatest diameter were changed from a square to a circular form, the slopes rising at angles of from forty-five to sixty degrees from a horizontal line.

In neighboring forests wood was cut from which charcoal was produced in heaps or meilers, and hauled in wagons to the furnace, similar vehicles delivering ore and limestone from near by mines and quarries. These materials were assembled on the bank against which the furnace was built or stored in the bridge house, which extended from the stack to the bank, from which they were fed into the "throat" or "tunnel head." This bank may have been at the level of the throat or somewhat below it, the earlier practice being to deliver the charcoal in baskets and the ore and flux in boxes to the tunnel head, and even after wheeled vehicles were substituted they were for a time utilized to carry the baskets and boxes, for these served to measure the relative quantities of materials fed to the furnace.

Campaigns or blasts were of short duration seldom exceeding eight or nine months of continuous operation, due to the necessity of renewing the crucible and boshes after that length of time, to the expense and inconveniences of assembling and storing sufficient fuel and ore for, and the cost of hauling metal during the winter months. The furnace having ordinarily used its supply of charcoal in the early part of each year was "blown out" and after the old hearth had been removed a new one of large blocks of sandstone built as described was put in place, the "inwall" which was of slate or refractory stone was patched or rebuilt if necessary; the dam which held back the creek waters and the race-ways were cleaned out, and the "bellows" overhauled. In the meantime all of the employes not required at the furnace were chopping wood for the next season's "coaling" which commenced in April or May depending upon weather conditions. As soon as the supply of charcoal could be depended upon with sufficient regularity, a new campaign was started.

To "blow in" a furnace, the entire stack was filled with charcoal and fire applied to the top. After several days, sometimes a week, when the fire appeared at the tuyere opening, sufficient fresh charcoal to again fill the furnace was added, the tuyere put in place, and connected with a leather "boot" to the blast pipe. In some instances the water wheel operating the bellows was started as soon as the furnace was refilled, but in others blast was not introduced until the fire worked its way back again from the tuyere to the tunnel head at the top of the stack. When the blast was on the furnace, ore and flux were fed at the tunnel head in increasing quantities, together

with charcoal, and in due time, if no mishap occurred, cinder and iron ran from the tap hole. As the campaign progressed the proportion of ore to charcoal or the "burthen" was increased until the furnace was working normally. The radical change in the method of "blowing in" a blast furnace which now prevails will be noticed on pages 67 and 68.

As the masonry enclosing the crucible was often four feet or more in thickness there was small chance for the excess of heat being conducted away and the core rapidly enlarged at the expense of the cut stone work. The record of an average campaign showed a small product until the crucible had become thus enlarged and the bosh slopes steepened, when a greater yield was obtained, up to the time when this increase in size had exceeded the capacity of the blowing apparatus; then indifferent operation and excessive fuel consumption resulted in causing the furnace to be "blown out" for relining. The production of satisfactory fire brick caused these to replace sandstone in the crucible and bosh walls, but until within a few years the bottom or hearth and the lower portion of the crucible of many blast furnaces were formed of sandstone. Some of these stones were conveyed long distances from quarries which had won renown for supplying good hearths, and as a rule the work upon them was done at the furnace into which they were to be set, consequently the hauling of massive blocks was a great expense. Not only were the fire brick cheaper in many cases, but they were generally more satisfactory. At first the fire brick walls were made as thick as stone walls, but gradually the thickness of the walls was decreased, as it was found that the heavy masonry was merely put in place to be destroyed by intense chemical and thermal action within the crucible, for it is not only the heat but the dissolving action of the cinder or the formation of silicates of iron which attack the refractory material used for lining blast furnaces.

### *Blast Furnace Records Prior to 1841.*

A number of old Pennsylvania blast furnaces have most interesting histories and among the early iron industries which obtained prominence by reason of its size and product was the Warwick furnace erected in 1738 near Pottstown. It was a square stone stack thirty-two feet high and had a bosh diameter during the various campaigns which completed its 130 years of activity of from seven feet six inches, to nine feet. Facts of interest in connection with this furnace are its contributions of projectiles for the war of the Revolution, and the dependence upon it for metal by the historic Valley Forge and other contemporaneous industries. The details of construction of this furnace are not accessible, but as these differed but slightly in the older stacks and the general dimensions

are known, its shape and proportions can be practically restored. The arrangement of the wooden bellows at this plant was probably similar to that employed at other furnaces (page 24). In "Iron in All Ages," Mr. Swank says that the Warwick and Cornwall furnaces measured twenty-one feet six inches at the base and eleven feet square at the top (the stack, page 24, is thirty feet square at the base, twenty feet square at the top, with a bosh diameter of ten feet and a height of thirty feet.) He states that "the furnaces each made from twenty-five to thirty tons of iron per week, and were required to produce both pig iron and castings, the latter consisting of stoves, pots, kettles, andirons and similar articles." Acrelius says that "for four months in summer when the heat is most oppressive, all labor is suspended at the furnaces and for ges." The foregoing description of equipment and the following statement of operations and details will be suitable for Warwick and Cornwall, and for many of the old furnaces (with minor modifications). It is probable that in the case of Warwick furnace, which originally was but eleven feet square at the top, that baskets and boxes were employed, as there would scarcely be room for barrows in this space, while in the somewhat later furnace illustrated (page 24) which was twenty feet square at the top barrows were utilized.

A monograph of Durham township, Pa., published in 1887 contains many interesting details concerning the Durham furnace, ten miles south of Easton, and near the Delaware river from which the following is excerpted. "The recorded history of Durham furnace dates from the year 1727. On March 4 of that year a stock company was formed for the purpose of making iron, and the first furnace of which anything authentic is known was put in operation in that year on the Durham creek about one mile and a half from its mouth, and in the center of a rich metalliferous deposit. It is said to have been between thirty-five and forty feet square. The water power of the creek was utilized in operating a number of forges and in working an enormous bellows that produced the blast."

The Durham and other stoves were manufactured at this furnace, and liberal amounts of shot and shell were supplied during the Revolutionary war. The shipments of shot and shell during the month of November, 1780, when the war was drawing to a close, amounted to upwards of two tons, and the price was twenty-five pounds per ton. The furnace of 1727 was in operation from that year until 1791 with occasional intervals of suspension from various causes.

Extracts from the furnace records demonstrates the difficulties encountered in its operation. In three years, May, 1780, to December 1782, the lengths of the seven campaigns or "blasts" were respectively;

seven weeks, ten weeks and five days, eleven days, seven weeks, one month, twelve weeks and four days and six months and one week. When in operation the furnace produced an average of eighteen tons per week. This record will be compared with later practice on subsequent pages. Litigation as to the title caused the furnace to be abandoned in 1791, and no iron was produced again until 1848-50. The product of the furnace was carried by Durham boats on the Delaware river. These boats were about twenty feet in length, and manned by five men, one of whom was at the helm, while two with stout poles in their hands, stood at each side and propelled the craft by pushing against the bottom of the stream. When moving against the current it was possible to progress at the rate of twenty-five miles a day. Shipments of stoves are reported to have been always made by land and never by boats, when the consignment was to Philadelphia. It required a full week for a team of four or six horses to make the journey to the city and return.

Having presented a general outline of the older charcoal blast furnaces attention will next be invited to some details of construction, the manner and costs of transportation, the buildings composing a furnace plant, the methods pursued in obtaining ore and charcoal, and the effect upon the forest areas of the State. Attention is first directed to the "fore part" or front of the furnace from which the discharge of molten iron and cinder are controlled.

### *The Fore Part.*

The practice at the cold blast charcoal furnaces and subsequently at some using hot blast, was to allow the cinder to flow continuously as it was produced, after it had risen high enough to pass over the forehearth dam. But with the enlargement of furnace stacks, and increased output of iron due to the application of heated blast, more powerful blowing apparatus and improved practice, the flow of cinder or slag became intermittent owing to its being held back until it approached the level of the tuyeres, where it was discharged as a "flush" by removing the clay tamping from the cinder notch.

When the flow of slag was continuous it was drawn aside by hooks as it congealed, broken by hammers, and carried to the dump in wagons or carts. Some of the furnaces also handled the cinder which followed casting by means of a chain secured to the shaft of a large windlass wheel, the vertical wheel being revolved by workmen treading on projecting arms drew the heavy mass of chilled cinder away from the furnace front to a point where it was subsequently broken so as to be handled to vehicles.

The molten iron which dropped into the crucible was allowed to flow into a "fore-hearth" constructed in front of the furnace proper, and as cinder accumulated it ran over the "dam" plate, until such

time as sufficient iron had filled the fore hearth to permit of casting. If the metal was to be run into castings, the crust was removed from and the iron was ladled out of the "forehearth." But if pig iron was to be made the "iron notch" at the bottom of the dam plate was opened by piercing a clay tamping, the molten metal flowing into a runner or "sow" extending the whole length of the casting house, and into pig molds in the sand at right angles to the sow, a practice differing materially from the present method.

Since the amount of iron run at a cast is now much augmented space must be economized, therefor in large modern furnaces the runners connect with a series of sows crossing the cast house transversely, and from these the pig beds are fed. Much of the iron made in the older blast furnaces, which were blown by air at atmospheric temperature, was of the close grades (the bulk of the carbon being combined) as this class of metal was in demand for forges, but some open grained iron (in which the carbon was graphitic) was produced for foundry purposes.

### *Transportation.*

To reach consumers the output of the cold blast charcoal furnace was frequently transported long distances or over difficult mountain roads to forges, to points of distribution or to canals and navigable streams. Large wagons drawn by horses or mules were employed for this purpose, and the record of Pine Grove furnace shows that castings and pig iron were conveyed over the hills to Baltimore on the backs of animals. These long trips required a number of days, and a return load of store goods was generally secured. As the blast furnaces were located on streams so as to obtain power to drive the water wheels operating the blowing mechanisms, they were usually in vallies, bordered by hills or mountains, and direct roads to markets required the ascent of these. The general custom was to utilize teams to draw light loads of iron to the summit of the mountain, and have there a stock of metal to increase the load to the amount which could be drawn over the roads with more favorable grades.

The older books in which blast furnace accounts were kept have been generally destroyed or such as have been preserved are so stored away as to make them inaccessible, and although absolute figures of the cost of hauling metal by wagon cannot be supplied for any of the older furnaces, it has been possible to obtain a record under similar conditions covering twenty years since 1870, and it is probable that the increased road facilities, and other advantages due to the later date would offset any advantage in cost of horse feed or labor, over what they were a century ago. The record from which the figures were obtained showed the cost of hauling pig iron by wagon in central Pennsylvania from the furnace to a railroad shipping point

twelve miles distant. Six horse teams were employed and each team hauled two and a half tons from the furnace to the mountain summit (one and a half miles), and five tons from the summit to the shipping point. Two days were required for a team to make the round trip, and the cost of maintaining each team together with the wages of the driver, amounted to $5.40 per day. The actual cost of hauling pig iron twelve miles as shown by the record for twenty consecutive years ranged from $1.07 to $2.93 per ton, the average being $2.36 per ton, but in this item of hauling was included the cost of breaking and inspecting the iron at say six cents per ton, and the loading of the same on cars at seventeen cents per ton, making the average actual cost of hauling $2.13 per gross ton.

Among the items going to make up the cost of hauling for one year in addition to the wages of teamsters, the corn, oats and hay consumed by the animals and the expense of wintering animals appear the following:

| | |
|---|---|
| Paid for harness and repairs on same..... | $220 21 |
| Blacksmithing and horse shoeing..... | 633 64 |
| Candles, oil, matches, etc., ..... | 102 59 |
| Carpenter work on wagons, ..... | 742 18 |
| Harness oil and grease, ..... | 58 58 |
| Veterinary services, ..... | 65 00 |

During the year 2,400 tons of pig iron were hauled and the back loads were probably 100 tons of coal and merchandise. At the average net rate above given $2.13 per ton hauled twelve miles the cost per ton-mile would be 17.75 cents, which permits of a comparison with railroad carriage at the present time.

The raw materials for producing iron in these older furnaces were handled by similar methods, horse or mules drawing large wagons brought charcoal from the meilers or heaps in the forests to the furnace bank, from which it was forked into baskets or barrows and stocked in coal houses or fed to the furnace through the bridge house. Ore hauled in wagons from the ore banks and limestone from the quarries were delivered on the bank to be broken by hand hammers and fed to the furnace. The cost of hauling charcoal naturally varied with the distance of the coaling jobs from the furnace, the character of the roads, their grades, etc. Records were obtained of the cost of hauling charcoal in a fairly rough country, in wagons holding about 200 bushels each, and it was found to average 1.6 cents per bushel, or say one-tenth of a cent per pound (the coal being light) for the average haul. Data concerning teaming from an ore bank four miles distant from a blast furnace where the grades favored the loaded wagons show that six horse teams drew five loads in two days delivering from 11.5 to 12 tons of ore to each team

at the contract price of 55 cents per ton, or at the rate of 14 cents per ton-mile. In another instance 5,300 tons of ore were transported in one year by tram road, mules hauling the cars at a cost of $1,996, as the distance was three miles, the cost per ton-mile is 12.6 cents.

*Labor and Cost at Charcoal Furnaces.*

The ores used in the charcoal blast furnaces of Pennsylvania as a rule were of higher grade than the material (chiefly bog ores) upon which some of the plants first constructed along the sea coast in other states depended. The magnetites from Cornwall and from near Pottstown yielded approximately fifty per cent. of iron although from the former considerable quantities of surface ore known as "nigger head" were obtained which approached sixty per cent. of metal, as from this ore much of the impurities were leached out. The brown hematites were carefully washed and sorted so that a yield of from forty-five to fifty per cent. was obtained from them. But the practice was crude and considerable iron was carried away in the cinder so that it is probable that fully two and one-half tons of iron ore were used for each ton of iron made. The statistics for 1839 indicate a consumption of two and three-fourth tons.

The fuel producing but little ash required a small quantity of flux, and only sufficient limestone to carry off the earthy matters in the ore was added.

The employment of air at normal temperatures, the restricted area of crucibles and the weak blast applied, added to the imperfect knowledge of the theory of iron smelting, resulted in a large fuel consumption, averaging from 3,500 to 4,000 pounds per ton of iron produced. The universal custom however was to measure, not to weigh the charcoal into the blast furnace, the bushel being the standard, but the bushel varied greatly, not only in different districts of the State, but even neighboring plants used different standards. At some iron works the charcoal was paid for by weight fifteen to twenty pounds being taken as a bushel, but the charging generally was by measure, and the measured bushel varied from 1,800 to 2,500 cubic inches.

A record of a cold blast charcoal furnace for twenty-two years shows that the cost of fuel ranged from $12.28 to $21.52 per ton of iron produced, the mean being $15.21. The total cost of making charcoal pig iron for this time varied from $24.46 to $41.38, the average being $29.88 per ton, while the selling price showed variations from $29.38 to $51.02, the average being $35.70 per ton.

These figures are introduced to illustrate the labor and costs at a time when the supplies of ore, fuel and flux required for a blast furnace, and the amount of pig iron produced were insignificant as compared with the demands and output of an average furnace of the

present time. Hand labor supplemented by animal power were only available in assembling the raw materials or for conveying pig iron to market, except where water transportation by boat could be secured, and as previously explained water power was almost universally applied to operate blast furnaces in Pennsylvania up to 1840.

If the expenses for hauling charcoal, ore and pig iron above given are applied to a furnace using say equal parts of ore brought by wagon and tram road, and consuming 150 bushels of charcoal, and 2.5 tons of ore to make one ton of pig metal, the total will show the cost of assembling the raw materials to make one ton of pig iron to be $3.80, but if the delivery of pig iron is added as above the transportation charges amount to $6.10 per ton of product.

### *The Iron Master.*

The owner or manager of one of these cold blast charcoal blast furnaces was the autocrat of the neighborhood, holding a firm control over all in his employ by the system of paying for services principally in store goods and supplies, but little money passing from master to man. The term "iron baron" was in many cases an appropriate one and the lavish hospitality dispensed at the "big house," as the mansion was called, encouraged numerous and often protracted visits from friends from distant points. The successful iron master was of necessity a man of marked ability and although he was a stranger to the technical knowledge required of furnace managers to-day, he had excellent opportunity to use all of his business acumen and to employ his knowledge to the utmost.

Each fall he must lay out his "jobs" and enter into contracts with the choppers, for the wood to be converted into charcoal during the following summer, that is he had to anticipate the probable wants of his furnace for from 6 to 12 months. In laying out these jobs he selected areas such as would give during the following coaling season employment to a proper number of colliers and permit of utilizing his wagons to advantage in hauling the charcoal to the furnace. He also distributed them in such manner as to have each year near and far jobs, proportioned so as to maintain an average haul and an average quality of charcoal, and so that forest fires would not destroy all of his cord wood,. He had to plan in advance for keeping a sufficient equipment of draught animals, wagons, etc., to transport the supplies of ore, charcoal and flux and carry the pig iron to market. He had to direct the operations of the iron ore mine or mines and stone quarries, supervise the acreage devoted to farming purposes, the operation of the grist mill, wheelwright and smith shops, etc.

In addition to the buildings immediately surrounding the blast

furnace stack, he had charge of large sheds for storing charcoal, stables for from 100 to 300 head of draught animals, granaries, etc. He gave oversight to the book accounts, and was necessarily alert on the subject of bargains, credits, etc. While the founder claimed to be monarch of the blast furnace when in blast, the manager or proprietor needed to be conversant with the details of the operation, and he was looked upon as available for advice in any case of sickness or distress among his employes or servants. While some of the old iron masters may have been harsh and severe in the treatment of subordinates in business their tenderheartedness was evident when any call for help or comfort came from the little community of which each was the head. Prior to 1800, slaves and military prisoners were employed at Pennsylvania iron works.

Some of the older blast furnaces were christened in honor of the wives or daughters of proprietors or managers, such was the case with the Elizabeth furnace in Lancaster county, and Mary Ann furnace in Berks county. The latter which was built in the last century continued in operation until 1869 and originally shipped its product by team to Philadelphia about seventy miles. This furnace is credited with producing and introducing cast iron stoves for the use of anthracite coal.

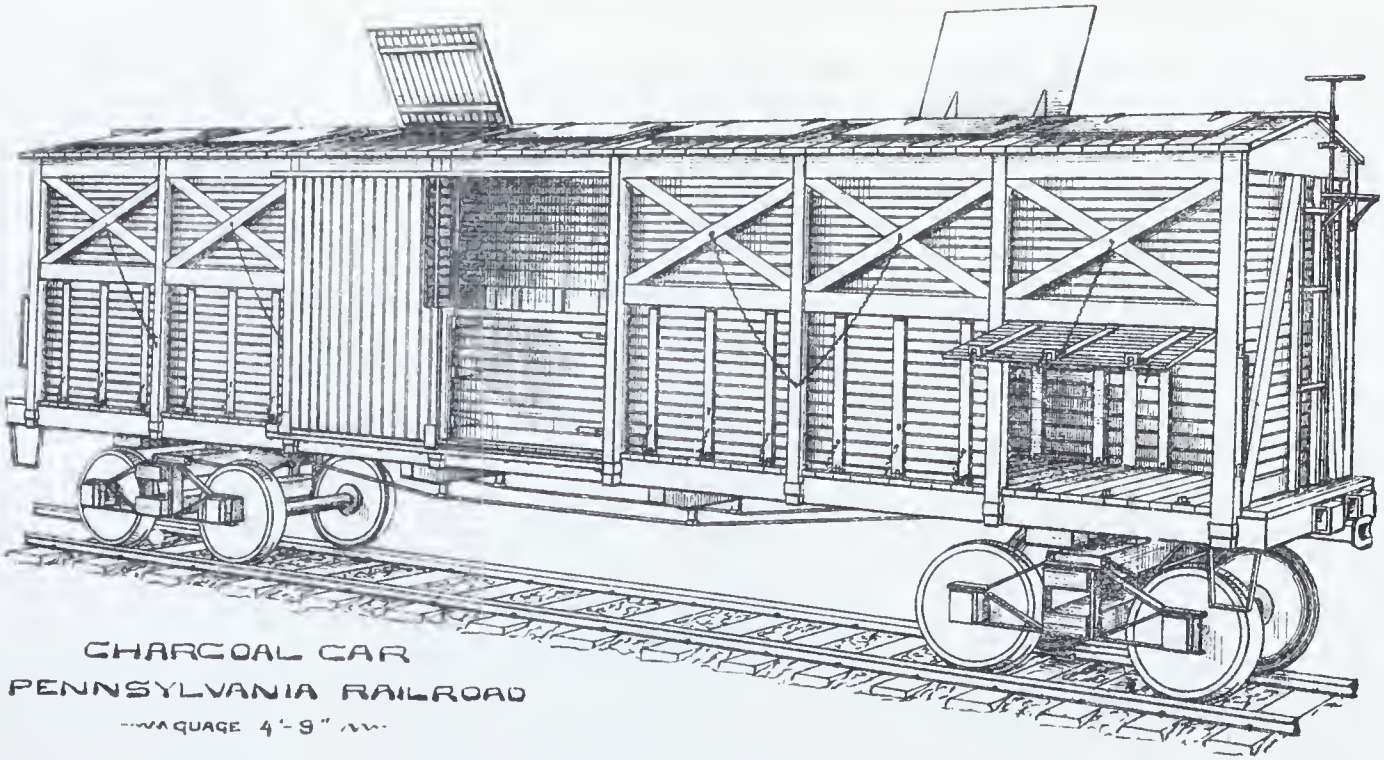
*Conditions as They Existed Prior to 1840.*

The canal system of Pennsylvania was mainly built between 1820 and 1840, these transportation avenues encouraging blast furnaces to locate so as to utilize them in drawing supplies or in shipping their product. Subsequently the construction of railroads changed many of the requirements of blast furnace location, but the necessity of being convenient to an abundance of fuel and the advantages at that time of a water power were sufficient reasons for most of the charcoal furnaces occupying their original locations. There are however to-day several plants in Pennsylvania which barring the convenience of railroads, are operated in the manner above described, and which produce within the acreage owned by the furnace proprietors, all the ore, fuel, flux and most of the provisions, hay, grain, etc., required by the plant or those employed about it.

Note.—According to "Tanners Canals and Railroads of the United States" Pennsylvania was credited in 1849 with 974 miles of canals and 953 miles of railroads. These figures are somewhat in excess of the mileage within State boundaries, but there was evidently over 900 miles of each of these important inland improvements extant at the close of what has been termed the "Charcoal Era."

*The Production of Charcoal.*

The inroads on the wooded areas of the State were heavy because few Pennsylvania blast furnaces have made attempts to economize



CHARCOAL CAR
PENNSYLVANIA RAILROAD
GAUGE 4'-9"

wood by the use of kilns, and it is only within a few years that saws have been employed in lieu of axes at a limited number of plants. The wood has chiefly been felled and cut with axes, and following older practice the length to which the wood is cut has been less exact than where the industry is of later establishment. Nearly all of the charcoal used at Pennsylvania blast furnaces has been produced in the woods in the open pit or meiler, the cord wood being piled into a cone and covered with earth and leaves, and from such piles from twenty-five to thirty bushels of charcoal are obtained per cord of wood. The average cost at a Pennsylvania blast furnace which produced 500,000 bushels of charcoal mainly in meilers was as follows:

*Cost of Producing 1,000 Bushels of Charcoal.*

| | |
|---|---|
| Cord wood delivered and placed in meilers, .. | $21 09 |
| Labor of colliers and assistants, ..... | 12 50 |
| Road making and repairs, ..... | 75 |
| Tools and supplies, ..... | 04 |
| Hauling charcoal from meilers to furnace, .. | 15 00 |
| Interest and incidentals, ..... | 2 50 |
| | $51 88 |

Or say 5.2 cents per bushel.

By improved practice wood is now charred in brick structures called kilns, placed in groups near the furnaces or convenient to a wood supply and a railroad to carry the charcoal to the furnaces, from thirty-three to forty-two bushels of charcoal per cord of wood being obtained from kilns using wood similar to that forming the meilers as described. An economy made possible by railroad extension is the conveyance of charcoal to the blast furnace in large cars specially constructed for the traffic. One Pennsylvania blast furnace may be instanced which now hauls charcoal from kilns by railroad, transporting it 350 miles, for $20.00 per 1,000 bushels. Which means that equating the different bushel measures as used at the two furnaces mentioned, the cost of hauling by wagon from the meilers to the furnace, distances averaging not over two and one-half miles was practically the same as the charge made by the railroad for transporting charcoal 350 miles. Stated in ton-miles the wagon haul was at the rate of nineteen cents and the railroad carriage less than 6-10 of one cent.

## PRESENT STATUS OF THE CHARCOAL-IRON INDUSTRY IN PENNSYLVANIA.

Although the charcoal era has been considered as ending in 1840, it is not to be presumed that the production of pig iron by the use of charcoal as fuel ceased at that time, for as already intimated it predominated as a blast furnace fuel for fifteen years later in the United States and probably nearly as long in Pennsylvania. Within the last decade the number of charcoal blast furnaces in Pennsylvania was almost as great as those using either of the forms of mineral fuel, although owing to the small dimensions of the charcoal stacks the output of iron was not in proportion to the number.

In 1894 there were fourteen blast furnaces in Pennsylvania on the active list which employed charcoal as fuel, but it is questionable if more than two-thirds of the number will again be operated.

The relative quantities of iron produced with charcoal and with mineral fuels from 1872 to 1894 is shown graphically on page 109.

It may be proper here to note the influence which the charcoal blast furnaces exerted upon the forest areas of the States. In their earlier history they made available much land for agriculture, by clearing it of timber without cost to the farmer, but as they increased in number and continued their demand for wood they, in conjunction with the lumber industry, depleted the timber supply of the State. But this encouraged the proprietors of each iron works to protect themselves by accumulating sufficient wooded areas to maintain the industry in continuous operation and for this purpose lands unsuitable for agriculture were largely selected. As a result in some of the mountainous and hilly sections of Pennsylvania there are large tracts of land on which the growth of forests has been encouraged, and although little efforts at reforestation have been made, the growing timber has received more or less protection. These tracts form valuable nuclei for a system of forest propagation and preservation which will probably be undertaken by the State in the near future, so that the former extravagant users of our forest domain may be the means of materially advancing the efforts to reclaim much of what has been considered lost. An investigation made in 1893 showed that the proprietors of twenty Pennsylvania iron works owned nearly 260 square miles of timber lands and that less charcoal was produced in 1893 than at any time for the two decades preceding, the quantity having varied during this interval from 8,000,000 to 1,700,000 bushels with a general decreasing tendency.

The Isabella furnace in Chester county, is one of the few remaining which make cold blast charcoal iron. The original stack erected in 1835 has been modified by an extension which nearly doubles its height, the present dimensions being 7 feet 9 inches in diameter at

the bosh, and a height of 60 feet. Large charcoal storehouses occupy the bank which was formerly the level of the tunnel head, a bridge leading from this bank to the hoist tower. In remodelling, the furnace was equipped with a modern blowing engine, boilers, etc.

## SELLING PRICES OF CHARCOAL PIG IRON.

Mr. William G. Neilson compiled for the Centennial Exposition of 1876 a statistical chart showing the growth of the trade, the development of internal resources, with the fluctuations in the prices of various staple products of the United States from 1799 to 1866. Among other items he gives the price of a gross ton of the best charcoal pig iron from 1799 to May, 1827, from May, 1827, to June, 1833, the prices for all grades of charcoal iron (average), from June, 1833, to January, 1840, the prices are for gray charcoal iron, from January, 1840, to the end of 1849, for No. 1 foundry charcoal pig iron. From 1849 to the end of the table he gives the price of No. 1 anthracite pig iron at Philadelphia.

This table shows that the highest average price received per year for the best charcoal pig iron was in 1815, viz, $53.75 per gross ton, the maximum monthly average being $55.00 per ton for the months of January to June in the same year, the lowest average annual price was $24.50 for No. 1 foundry iron, in 1849, the minimum monthly average being $23.50 for August of that year. Since that time, however, the price have decreased and in 1894 No. 1 foundry charcoal pig iron was bought in Philadelphia for $13.00 per ton. Some Pennsylvania charcoal iron, however, being sold at double this figure, but this was iron made at the Greenwood and Isabella cold blast furnaces, for which there is a limited demand for special purposes, and which for a long series of years has maintained a reputation for uniformity and superiority of product.

The discussion of pig iron made with mineral fuel is treated of in the next division of this monograph, but it will be of interest to note in connection with the above statement that the highest average price of No. 1 anthracite pig iron for a year was $59.25 in 1874, the maximum monthly average being $73.62½ in August of that year. Since then the prices have declined, the lowest yearly average being $12.66 in 1894, and minimum monthly average $12.00 in February, 1894, during a season of prolonged business depression.

## THE ERA OF DEVELOPMENT.

Although charcoal was practically the only fuel used to any extent for smelting iron ore, and there had been but few changes in the designs of blast furnaces or their equipment in a century or more, some

of the later charcoal furnaces were of larger proportions than the earlier structures, and increase in the power of machinery permitted greater yields of pig iron. But prior to the year 1840 the employment of mineral fuel, the application of heated blast and the use of steam as a motive power may be considered as experimental only. It will, therefore, be appropriate to introduce some data as to the first use of mineral fuel, the heated blast and steam blowing machinery, as matters of historical interest, omitting descriptions of blast furnaces which may be credited to a transition period, for these were practically of the same general construction and arrangement as the furnaces in use at the commencement of the era of mineral fuel, differing only in detail, most of the changes and improvements having been subsequent to 1840.

*Application of Mineral Fuel.*

Anthracite coal is reported to have been used in heating furnaces as fuel in Philadelphia in 1812, but the first attempt to utilize it in a blast furnace was in Maryland in 1815, where it was mixed with one-half charcoal. In 1824 and 1828 Mr. Peter Ritner was successful for a short time using anthracite coal mixed with charcoal in a blast furnace in Perry county, Pennsylvania, and in 1826 the Lehigh Coal and Navigation Company made an unsuccessful attempt to smelt iron ore with anthracite coal. It was not until the hot blast stove was introduced into this country that anthracite coal was used with success in a blast furnace, by the Rev. Dr. Frederick W. Geissenhainer, who made experiments in a small way in New York city, and in 1836, built the Valley furnace near Pottsville, Pa., where he made pig iron successfully, using anthracite fuel exclusively. Small amounts of anthracite pig iron are also claimed to have been made in 1837 in a foundry cupola at Manayunk, and in 1837, '38 and '39 at Mauch Chunk. In 1839 the Pioneer furnace at Pottsville was blown in, using anthracite coal as fuel; the first attempt met with failure, but later in the same year it was again blown in, and Mr. Lyman was awarded the premium as the first person in the United States who made anthracite pig iron continuously for three months.

The operation of the Pioneer furnace using anthracite coal as fuel drew the attention of blast furnace owners, and anthracite pig iron was made in 1840 at Danville, Phoenixville and Catasauqua, Pa. The name of the party operating the furnace at the first mentioned place is not given, but that at Phoenixville was directed by William Firmstone, and at Catasauqua by David Thomas, both of whom became renowned as Pennsylvania iron masters.

As there are to-day champions of various pioneers for the honor of applying anthracite coal successfully to iron smelting, we accept as most reliable the statements given by Mr. James M. Swank in

"Iron in All Ages," who, as a disinterested historian, is justly credited with a careful and thorough investigation. As in every other innovation, a number of progressive individuals gave their help at various stages of the development and each is entitled to praise for what was accomplished.

Pig iron had been produced from bituminous coal in England as early as 1735, but it was not until a century later that William Firmstone, in 1835, ran the Mary Ann furnace in Huntingdon county, Pa., for about a month using coke made from Broad Top coal. An unsuccessful attempt in the same direction was however made at the Bear Creek furnace in Armstrong county, Pa., in 1819, but the blast was cold and weak and the furnace chilled after making two or three tons of iron. In 1837, F. H. Oliphant made a considerable quantity of coke pig iron, probably exceeding 100 tons at the Fairchance furnace near Uniontown, Pa., he, however, afterwards resumed the use of charcoal. Subsequently, numerous experiments were made, but it was not until 1850 that coke began to exert an appreciable influence upon the manufacture of pig iron. No coke furnace was in blast in 1849, while in 1856 twenty-one furnaces in this State were reported as either using or adapted to the use of coke or bituminous coal.

Coke is produced from bituminous coal by practically the same method as is employed in making charcoal from wood, for in all coking operations the work to be accomplished is to expel the gaseous elements of the coal, retaining the carbon and ash which constitutes the coke. At first heaps were made and covered with fine coal so as to restrict the activity of combustion to the above requirements; subsequently, ovens of a bee-hive form were constructed of brick, and in these a layer of coal was placed and submitted to distillation for from two to three days. Rectangular ovens of different design and with side or bottom flues followed, but the bulk of the coke has been produced in bee-hive ovens.

A large amount of bituminous coal was also used in the raw state, particularly in the furnaces north and west of Pittsburgh. Often, however, coke was mixed with the raw coal to keep the furnace more open and reduce the tendency of the materials to bridge and slip.

### *Early Anthracite Blast Furnaces.*

In 1874, Mr. William Firmstone, in a sketch of the early anthracite furnaces,* speaking from personal recollection, said "In the year 1840 there were only six furnaces using anthracite, two of them on the Schuylkill river, three of them on the Susquehanna river and one on the Lehigh river, making from thirty to fifty tons a week each. At

*Transactions American Institute of Mining Engineers, Vol. III, p. 152-66.

three of the above mentioned furnaces, viz, Mauch Chunk, Phoenixville and Columbia, the hot blast ovens were heated by the flame escaping from the furnace, at others the ovens and boilers were on the ground and heated by independent fires."

He gives the following interesting facts concerning the size, equipment and capacity of these early anthracite furnaces: "The dimensions of the Mauch Chunk furnace were: height, 21½ feet; diameter of boshes, 5½ feet; hearth, 19x21 inches; length from back to dam stone 5 feet 3 inches. An overshot water wheel, 14 feet in diameter, with 3½ feet buckets, drove two single acting wooden blowing tubs, each 6 feet in diameter and 11-inch stroke, making 12 strokes per minute, suplying about 700 cubic feet of blast per minute. The maximum rate of product was 2 tons of pig iron a day, of Nos. 1, 2 and 3 grades. The fuel used was anthracite exclusively. The temperature of blast 400 degrees to 600 degrees F. Local brown hematite ore mixed with magnetite, from the Dickerson mine, New Jersey, was smelted."

A vertical section of this experimental furnace (Fig. 1 facing page 50) is copied from an illustration in Pearce's "Concise History of the Iron Manufacture of the American Colonies up to the Revolution, and of Pennsylvania until the present time." It is shown drawn, to the same scale as the anthracite blast furnaces subsequently erected so as to illustrate the relative size, proportion and design. It is, however, of greater interest on account of being a record of an early attempt to produce anthracite pig iron than an example of a practical enterprise. On the top of the structure a stove for heating the blast is shown, the flames from the tunnel head of the furnace played about the pipes through which the blast was forced by the wooden blowing tubs. The air, after being heated, was carried to the ground level and thence to the tuyeres. The channels shown in the stone masonry of the stack were constructed to serve as gas vents.

The following data excerpted from Mr. Firmstone's paper are presented so as to indicate in connection with similar memoranda of later furnaces which appear in subsequent pages, the changes in size, construction, arrangement and the greatly increased output of blast furnaces using mineral fuel.

"The Pottsville furnace, which blew in October, 1839, was 35 feet high and 8 feet 9 inches diameter at boshes. The hearth, built of stone, 3½ feet square, and was blown by steam power. A 15-inch steam cylinder, driving two blast cylinders each 40 inches diameter, and 6 feet stroke, at 18 revolutions a minute. The blast was heated in ovens at the base of the furnace, with anthracite coal to a temperature of 600 degrees F., and supplied through 3 tuyeres at a pressure of 2 to 2½ pounds per square inch. At the blowing in of this

furnace, the plan was adopted, afterwards so extensively followed, of using closed tuyeres and a closed forepart, tapping out the cinder periodically. The product was about 40 tons of foundry iron from brown hematites and carbonates of the Coal Measures. Up to this time the blast nozzle was inserted into the tuyere loosely, leaving an air space between them, and the cinder flowed as described continuously. When the blowing machinery developed higher pressures, it was necessary to lute this space between the nozzle and tuyere, and also that between the tuyere and the opening in the crucible with clay, making a closed tuyere. The fore part or fore hearth was closed by a tamping of charcoal braize and clay, held in place by a plate of iron which was removed when cinder was to be tapped.

"During the next year 1840, four furnaces were blown in on the Schuylkill and Susquehanna rivers with anthracite coal and, profiting by the working at Pottsville, success was attained at all."

"The Danville furnace, Montour county, built in 1839, was 30 feet high, 7½ feet diameter of bosh, and had 2 tuyeres and steam power, a 12-inch steam cylinder, 4 feet stroke, driving 2 blast cylinders, each 40 inches diameter and 42 inch stroke, 30 revolutions a minute, steam pressure 100 lbs. to the square inch; blast pressure 2¾ lbs.; blast temperature, 600 degrees, F.; 35 tons of pig iron per week were produced from fossiliferous ore (red hematite)."

"The Roaring Creek furnace, Montour county, measured, height, 30 feet; diameter of bosh, 8½ feet. It had 3 tuyeres; water power furnished 2,400 cubic feet of blast per minute, at a temperature of 650 degrees, F., and 2½ pounds pressure. Product, 40 tons a week of gray pig iron, from fossiliferous ore."

"The Phoenixville furnace, Chester county, was 33 feet high, 8 feet diameter at the boshes, the bosh sloped 65 degrees. The stone hearth was 3 feet square and 6½ feet long to the dam; water power supplied 1,700 cubic feet blast a minute under a pressure of 1½ pounds to the square inch; temperature, 700 degrees, F.; 1¾ tons of anthracite coal were consumed in making one ton of gray forge pig iron."

"Columbia furnace at Danville, Montour county, was built in 1839 and blown in in 1840. It was 33 feet high, 8½ feet diameter at bosh; hearth, 3½ feet square. A steam cylinder, 12 inch diameter and 3½ feet stroke, with steam 100 pounds to the square inch, running 25 revolutions per minute and driving two blast cylinders, 32 inches in diameter, 5 feet 4 inches stroke; 15 revolutions in a minute gave a pressure of blast of 3 pounds; temperature, 600 degrees. The product was 30 to 32 tons a week of foundry iron. Ore, fossiliferous."

"The Catasauqua furnace was blown in by David Thomas on July 4, 1840. Its dimensions were, height, 40 feet; diameter at boshes, 11 feet; hearth, 3½ feet square. With three tuyeres the pressure of

blast was 2½ pounds per square inch; temperature, 600 degrees, F. In the first campaign the average output was 41¼ tons of iron per week, with an average consumption of anthracite coal of 2.04 tons per ton of pig. This figure included 0.54 tons of coal used for the hot blast. In the second blast of 64 weeks, the average consumption of anthracite coal was 2.16 tons per ton or pig and the make 52 tons per week. The product was foundry iron made from brown hematite, yielding from 40 to 45 per cent. of metallic iron.

The power employed was a water wheel, 12 feet diameter and 25 feet buckets, driving 2 blast cylinders, each 5 feet diameter and 6 feet stroke, 10 revolutions per minute. With the erection of a second furnace in 1842 commenced the era of higher and larger furnaces and better blast machinery, with consequent improvements in yield and quality of iron produced."

The late G. D. Coleman first produced pig iron from Cornwall ore with anthracite coal at the North Lebanon furnace in 1847. This plant is still operated by the heirs of Mr. Coleman, relying solely upon Cornwall ores, but using coke mixed with anthracite coal as fuel.

The anthracite blast furnace erected in 1846 at Chickies, in the Susquehanna, which is illustrated (page 50) was originally 40 feet high and 8 feet in diameter at bosh, as shown by Fig. 2. Its record shows that in the first blast 2.26 tons of anthracite, and 2.47 tons of iron ore were required per ton of pig iron produced, and in nine years it went in and out of blast thirteen times, its campaigns varying from twenty-one days to twenty months duration. In 1855 the bosh diameter was increased to 10 feet 10 inches, but its height was not altered, and but five campaigns were made in the six years following. The height of the furnace was, in 1861, increased 5 feet, and after two campaigns of forty-four and sixty months respectively, during which 1.67 tons of anthracite and 2.19 tons of ore were required per ton of pig metal, the furnace was lined to the dimensions shown by Fig. 3. 57 feet by 11 feet.

The above record of the Chickies furnace appear in Mr. Pearce's book and is reproduced here in connection with the excerpts from Mr. Firmstone's paper to show the development of the anthracite blast furnaces. It will be noticed that in the original stack, Fig. 2, the hot blast stove and boilers are shown at the top of the stack, the furnace gases being drawn under the boilers, returning through the flues to the connection with the hot blast stove and thence to the chimney. Fig. 3 shows the same stack with an extension of brick masonry bound by an iron shell increasing the height of the furnace to 57 feet, the furnace gases being conducted by flues to the original level of the furnace.

*Number of Blast Furnaces 1856 to 1876.*

In March, 1858, Mr. J. P. Leslie gave the following as the number of blast furnaces in Pennsylvania and in the United States* at that time:

| | In Pennsylvania. | In United States. |
|---|---|---|
| Anthracite blast furnaces, ..... | 93 | 121 |
| Charcoal and coke furnaces, ..... | 150 | 439 |
| Abandoned furnaces, ..... | 102 | 272 |

Of the 73 charcoal furnaces in Clarion, Venango and Mercer counties, Pennsylvania, 37 were reported as abandoned. He states that "Eastern Pennsylvania and Northeastern Maryland is the greatest iron region in the Union, containing 98 anthracite and 103 charcoal furnaces and 117 forges, none of which last produce iron from the ore. * * * * * * Northwestern Virginia and Southwestern Pennsylvania (including Johnstown) had 42 furnaces, while in Northwestern Pennsylvana, including northeastern corner of Ohio, there were 66 furnaces." He also gives the production of anthracite pig iron in Pennsylvania in 1854 as 208,703 gross tons, and in the balance of the United States, 99,007 tons, while in 1855, 255,326 and 87,779 tons were respectively produced.||

The following statistical table gives the number and product of blast furnaces in Pennsylvania in various years, and also the kind of fuel used; the record of other iron industries is introduced to indicate the application of the pig metal made.

*Pennsylvania Pig Iron Statistics, 1856-1873.*

| 1856. | Product. |
|---|---|
| 93 anthracite furnaces, ..... | 306,972 tons pig iron. |
| 6 raw-coal furnaces, ..... | 8,417 tons pig iron. |
| 21 coke furnaces, ..... | 39,953 tons pig iron. |
| 143 charcoal furnaces, ..... | 96,154 tons pig iron. |
| 111 forges, ..... | 31,727 tons blooms and bar. |
| 93 rolling mills, ..... | 156,650 tons bar plate, etc. |
| 8 rail mills (also a mill tolling 1,000 tons, ..... | 84,834 tons rails. |

*Iron Manufacturer's Guide to Furnaces, Forges and Rolling Mills of the United States.

||Mr. James M. Swank gives the production of anthracite pig iron in the United States in 1854 at 303,066 gross tons and 340.951 gross tons in 1855.

| | |
|---|---|
| 6 steel works in operation, capacity 8,500 tons (?). | |
| 1864. | |
| 105 anthracite furnaces, 90 in blast, | 519,600 tons pig iron. |
| 20 coke furnaces, ..... | 77,549 tons pig iron. |
| 17 raw-coal furnaces, 11 in blast, .. | 44,671 tons pig iron. |
| 70 charcoal furnaces, 61 in blast, .. | 53,171 tons pig iron. |
| 71 forges, 67 in operation, ..... | 34,911 tons blooms, etc. |
| 93 rolling mills, ..... | 232,714 tons bar plate, etc. |
| 11 rail mills, ..... | 157,722 tons rails. |
| 14 steel works, one quarter cast, three-quarterss blister, ..... | 9,771 tons steel. |
| 1873. | |
| 149 anthracite furnaces, ..... | 913,085 tons pig iron. |
| 25 raw-coal furnaces, ..... | 160,831 tons pig iron. |
| 49 coke furnaces, ..... | 269,803 tons pig iron. |
| 39 charcoal furnaces, ..... | 45,854 tons pig iron, |
| 33 forges, ..... | 23,748 tons blooms. |
| 121 rolling mills, ..... | 480,469 tons bar, plate, etc. |
| 17 rail mills, ..... | 328,522 tons iron rails. |
| 16 cast steel works, ..... | 33,151 tons cast steel. |
| 4 Bessemer steel works (2 building), ..... | 47,533 tons steel rails, etc. |

Mr. William Firmstone stated, in 1874, that "out of the 680 furnaces in the United States, 226 are anthracite, producing nearly one-half of all the pig iron made. The size of the furnace has increased from 8 feet boshes and 30 to 40 feet high, to 20 feet boshes and 80 feet high, furnaces with 16 feet boshes and 60 feet high being the most numerous. Some of those 70 to 80 feet high making 300 tons of pig iron a week, using a blast pressure of 6 to 8 pounds per square inch, and a temperature of 700° to 900° with a consumption of coal less than 1½ tons to the ton of pig iron of grade No. 3."

This was a most creditable record but although great advances had resulted at the time Mr. Firmstone made his comparison, the managers of iron works were only beginning to appreciate the possibilities of the blast furnace, and the chemistry of the smelting processes. At present writing more iron is made in a furnace per day than the maximum weekly product of two decades ago, mentioned by Mr. Firmstone, while the fuel consumption has been greatly decreased and the temperature of blast applied raised considerably.

The following statement collated from the reports of the American Iron and Steel Association will show the number and distribution of the blast furnaces of Pennsylvania, and the fuel used at the close of the era of development.

Distribution of Blast Furnaces in Pennsylvania, December 31st, 1873, 1874 and 1876.

| | 1873. | 1874. | 1876. |
|---|---|---|---|
| *Anthracite Furnaces:* | | | |
| Lehigh valley, | 47 | 47 | 51 |
| Schuylkill valley, | 40 | 43 | 50 |
| Upper Susquehanna valley, | 25 | 25 | 26 |
| Lower Susquehanna valley, | 37 | 37 | 37 |
| Total anthracite, | 149 | 152 | 164 |
| *Bituminous Furnaces:* | | | |
| Allegheny county, | 11 | 11 | 11 |
| Shenango valley, | 31 | 32 | 30 |
| Miscellaneous coke, | 32 | 32 | 35 |
| Total bituminous, | 74 | 75 | 76 |
| *Charcoal Furnaces:* | 39 | 39 | 39 |
| Total for the State, | 262 | 266 | 279 |
| Total for the United States, | 657 | 693 | 714 |

The essentials for the support of blast furnaces in any state or district are an abundant fuel supply suitable for use in smelting ores obtainable at small cost, facilities for assembling ores of satisfactory character in sufficient quantities at prices which permit of their use; fluxing materials near at hand whose composition makes their employment advisable, a liberal supply of skilled and navvy labor and a market for the product either close at hand or within easy reach at transportation charges which will give the blast furnaces the advantage of competing with those in operation elsewhere. Pennsylvania is unusually favored in the wealth of its mineral products suitable for pig iron manufacture, in a large supply of skilled artisans of all kinds and of ordinary laborers, and it offers a most extensive and varied market for pig iron on account of the diversity of its manufacturing industries.

The ore supply has been referred to in the introductory portion of this paper, and the displacement of local ores by others from the Lake Superior region and elsewhere noticed. It, however, may be mentioned that this displacement is not due to the exhaustion of the ore deposits of Pennsylvania, but rather to the possibility of bringing richer ores from a distance at prices which permit of their use, and that drawing the iron ore supply from without the State has not restricted the growth of the iron industry, for the advance of Pennsylvania has been abreast of that of the country. Subsequent improvements in beneficiating and purifying ores or the introduction of processes to use economically some grades not at present in demand may revive some local ore industries, but the conditions as they now

exist will form the basis for consideration in this paper. The character of fuels used in Pennsylvania blast furnaces and the sources from which they are derived will next command attention.

*Fuel Supply of Pennsylvania.*

The fuel supply of the State embraces the three varieties which have been used in blast furnaces, viz: charcoal, anthracite and bituminous coals, and in addition the State ranks first as a producer of petroleum and of natural gas.

The name given to the State because of its abundance of forests was demonstrated as appropriate by the support of the numerous charcoal blast furnaces, forges, etc., which have been specified, depending for their fuel upon the denudation of forest areas to supply wood for the production of charcoal, and although mineral has largely displaced vegetable fuel, there are active iron works in the State to-day which rely solely upon charcoal as fuel.

Pennsylvania stands first among the states of the Union as a producer of coal, its anthracite deposits being unique and its veins of bituminous coal more liberally worked than elsewhere.

Anthracite coal has been mined in the State for 75 years, but the production never reached one million tons until 1842, after the possibility of applying it to the smelting of ores had been demonstrated. Its use in iron works and the extension of railroads caused it to be produced in a ratio in excess of that of the increased population.

From 1842 to 1864 the annual production of this form of fuel increased tenfold, from 1,000,000 to 10,000,000 tons, and this amount was again doubled (to 20,000,000 tons) in 1873. The shipments of anthracite coal for 1894 show another step in geometrical progression; for, if to the 41,000,000 tons of anthracite shipped, we add the coal used at the mines, a production exceeding 45,000,000 tons is accounted for.

The total output of the anthracite regions of Pennsylvania for the past seventy-five years approximates 900,000,000 tons. Of this, over half has been mined since 1883.

In addition to the above large output of the anthracite coal mined, Pennsylvania contributes more bituminous coal than any other state. Exact statistics of this coal have not been collated for many previous years, but in 1893 the production was nearly 40,000,000 long tons, an increase of two-thirds since 1886, when but 24,000,000 long tons were mined.

From a large area of the State, coal producing excellent coke is obtained. The superiority of this coke has made it recognized as the standard for comparison; in fact, Connellsville coke has few superiors. Other bituminous coals in the State also supply excellent coke and some which produce less desirable metallurgical coke have in

several localities been improved by preliminary washing and by crushing the coal. The bulk of the coke made is used for iron smelting, and a considerable portion of the annual output of the 25,741 coke ovens in Pennsylvania is shipped to other states. Over one-half the coke ovens in the United States are located in this State, and these ovens produced in 1893 over 5,500,000 gross tons, the total for the United States being not quite 8,500,000 gross tons, so that Pennsylvania supplied about two-thirds of the total coke manufactured in the United States in that year.

*Comparative Values of Fuels.*

Mr. John Fulton, M. E., who has contributed liberally to the knowledge we possess upon coking coals says:

"In determining the most desirable physical properties of fuels designed for metallurgical uses, with the reasons for such; the blast furnace test, under justly equated conditions of work, may be regarded as the supreme court of fuel decisions. The chemical composition of the three blast furnace fuels can be studied in the following table giving their proximate analyses:

| Elements. | Charcoal. | Anthracite. | Connellsville Coke. |
|---|---|---|---|
| Moisture, 212 degrees F., ..... | 3.50 | 2.50 | 0.49 |
| Volatile matter, ..... | 6.49 | 4.00 | 0.011 |
| Fixed carbon, ..... | 87.00 | 87.00 | 87.46 |
| Ash, ..... | 3.00 | 6.00 | 11.32 |
| Sulphur, ..... | trace | 0.50 | 0.69 |

It is remarkable that the porous and energetic charcoal fuel should have been succeeded by the densest and least energetic anthracite coal. In the order of progress a fuel midway between these should have succeeded the primitive charcoal. But such was not the case. About the year 1850, coke began its career of usefulness in metallurgical operations.

The expansion of its use in the metallurgy of iron is marvelous. It is now the most prominent of all the fuels, overtopping its competitors and maintaining its place of usefulness with continued progress and undiminished energy. In the consideration of the physical and chemical properties of these fuels it will be observed that the difference in the heat producing elements in the anthracite coal and coke is quite small, the charcoal surpassing both in this respect.

It has been claimed that a pound of carbon in any of these fuels should produce equal calorific results in blast furnace work, but results show that a pound of carbon in the three fuels produces different results in iron smelting in blast furnaces. Taking the best work in typical furnaces, using the three fuels without mixture, one pound of each kind of fuel melted the following weights of pig iron:

| | |
|---|---|
| Charcoal, | 1.234 pounds. |
| Anthracite coal, | 0.998 " |
| Coke | 1.289 " |

Each unit of carbon melted the following quantities of pig iron:

| | |
|---|---|
| Charcoal, | 1.418 pounds. |
| Coke, | 1.474 " |

As assumed that in these three typical examples the furnace condititons, the ores and flux, with the management, are practically equal, it follows that the superior value of coke fuel is secured from its physical structure.

Anthracite fuel is quite dense in its physical structure, affording no appreciable pores or cellular spaces.

Its breaking up in mining and subsequent decripitation in the blast furnace affords moderate energy to its action in iron smelting. In many furnaces supplementary energy is given to this fuel by composing the furnace charge of mixed anthracite coal and coke.

In the best qualities, the cellular spaces to the whole volume of coke are practically fifty per cent. The aggregate surface of this cellular development, with the slender columnar structure of the coke, secures the utmost calorific energy in the furnace and the greatest economy of fuel in smelting the ores of iron.

In the manufacture of coke, such oven conditions should be secured as will afford liberty to the coal in coking to develop the best condition of cell structure; avoiding on the one side spongy coke and on the other any approach to the density of anthracite coal."

The relative values of coke and anthracite coal are referred to in describing the workings of the Warwick furnace (page 93) and a practical test of the three fuels, and mixtures of coal and coke were made at the Pine Grove furnace, of which mention appears on page 86.

*Fuel Production in the United States.*

The United States now produces about thirty per cent. of the world's output of coal, while it consumes, in addition, great quantities of wood, charcoal, oil and natural gas.

The fuel consumption is well set forth in the following table:

| | 1870. | 1880. | 1890. |
|---|---|---|---|
| Gross tons of anthracite coal, | 13,925,229 | 25,580,189 | 40,714,721 |
| Gross tons of bituminous coal, | 15,356,619 | 38,242,641 | 85,383,059 |
| Bushels of charcoal, | No report. | 74,008,972 | 90,000,000* |
| Cords of wood, | No report. | 145,778,137 | 180,000,000* |
| Barrels of petroleum, | 5,260,745 | 26,286,123 | 34,820,306 |
| Natural gas, value in coal displaced, | No report. | No report. | $20,000,000* |

An estimate made from returns collected for the Eleventh census

*Estimated.

‖Vide Transactions American Institute of Mechanical Engineers, Vol. XX, page 412.

indicated a consumption of fuel in the production of pig iron as follows:

| | | |
|---|---|---|
| Anthracite coal, ..... | 2,000,000 | net tons. |
| Coke, ..... | 9,250,000 | " |
| Bituminous coal, ..... | 500,000 | " |
| Charcoal, 67,675,000 bushels, about | 570,000 | " |

*Blast Furnace Structures During the Era of Development.*

When blast furnaces depended upon charcoal for fuel, the capacity of the plants was restricted by the quantity of wood which could be cut, coaled and delivered to the furnaces by a moderate wagon haul, but when the application of mineral fuel was found practicable there was no restriction upon the quantity which could be assembled at a given point, for the distance to be covered was practically constant. Naturally, the early development of furnaces to use mineral fuel was in or close to the anthracite coal fields or upon the rivers which were improved by canalization. Some of the earlier anthracite furnaces were operated by water power and were, therefore, located on rivers, but as steam engines rapidly grew in favor, furnace sites could be selected which possessed advantages in the receipt of material or in the shipment of product.

There was also no longer necessity for constructing blast furnace stacks close to the banks upon which the supplies of raw materials were assembled, at about the level of the tunnel head, and, as the size of the stack was enlarged and the equipment increased in power, there were various changes in form of structure. The following general modifications resulted and, although the favor which they met in different parts of the State, prevents giving them in any chronological order, the transition may be summarized thus:

More active combustion in larger crucibles demanding a greater volume of air per minute and its more thorough distribution called for an increased number of tuyeres and of corresponding openings in the masonry "tuyere arches," through which access to the tuyeres was had. The earlier furnaces had what is known as the "fore arch," or "working arch," at the front of the furnaces and one tuyere arch at the back or on one side. Subsequently tuyere arches were made on both sides, and also on the back, and then the arches were so widened as to permit of two tuyeres being placed in each, and one tuyere in the fore arch. Later piers alternating with openings for tuyeres, were constructed to carry the shafts of the furnaces.

As the mass of masonry surrounding the crucible was diminished in thickness, and as improved practice favored larger crucibles, which, with brick, were made circular instead of square in section; means of holding the brickwork in place became a necessity. This

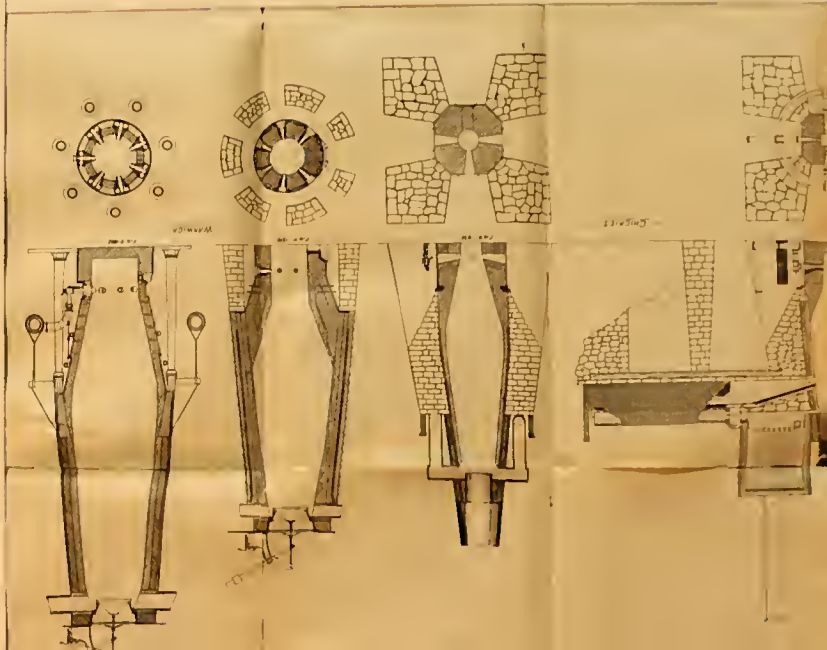
was accomplished by the use of heavy bands or hoops of wrought iron, and after the fore-hearth was dispensed with, cast or wrought iron jackets surrounded the fire-brick masonry in the lower portion of the furnace. Such support made the crucible and bosh walls independent of the stack masonry, and the square tapering stone structures gave way to others circular in plan, built of brick work in the form of truncated cones banded with iron hoops, the lower portion being a series of pillars, the spaces between which giving access to the crucibles served as tuyere and fore-arches, the pillars and heavy cast iron sows spanning the openings, sustained the masonry. Following this came the employment of cast iron columns carrying a heavy cast iron mantel ring which supported the shaft masonry. This change in structure is well illustrated. See page 50. Figs 1, 2, and 3 show square stone stacks with two and three tuyere arches and a fore-arch. Fig. 4 illustrates a circular brick shaft banded with iron and supported on masonry piers. Fig. 5 shows the upper part of the stack jacketed with wrought iron and carried on cast iron columns and mantel ring. The plate also illustrates the change in interior form of the furnace, the enlargement of crucible, the reduction of thickness in walls, the steepening of bosh walls and the increased height of furnace. The open top, connected with boilers and hot ovens, the conduction of furnace gases in iron flues, the closing of the top with bell and hopper and the sealing of the top are also shown. Other modifications are illustrated on Figs. 1 and 2.

This illustration shows the development of the anthracite pig iron industry in the change of form, dimensions and arrangement of the blast furnaces using this fuel in whole or in part. Five vertical sections of furnaces marking special stages of development are indicated and below these corresponding horizontal cross sections at tuyere level are shown.

Fig. 1 shows the experimental anthracite furnace erected near Mauch Chunk in 1838, with a hot blast stove placed on top of the stack structure. The total height of the furnace was 21 feet and the diameter at bosh 5½ feet. It was blown with two tuyeres.

Fig. 2 illustrates the Chickies furnace erected in 1846, a stone stack, 40 feet high; 8 feet diameter at bosh, from which the gases were passed under boilers and returned through the flues to a hot blast stove, placed near the tunnel head, a draught stack assisting in drawing the gases through the chamber in which were placed 45 U. pipe. The hearth of this furnace was of sandstone pierced for three tuyeres.

Fig. 3 is the same stone furnace stack (Chickies) upon which is in an extension of brick masonry, held in place by an iron jacket, making the working heighth of the furnace 57 feet. and the bosh 11 feet in diameter. The gases are brought from the tunnel head by iron



flues as shown, connecting below the "thimble" which was used for charging the furnace. This furnace has since been replaced by a more modern structure 65 feet high and 12 feet bosh.

Fig. 4 exhibits a circular brick structure held by iron bands and carried on stone columns. It illustrates the form and arrangement of the Warwick furnace up to the year 1889, and shows the vertical water coils inserted in the masonry walls of the bosh and crucible. The dotted irregular lines are introduced to show how a blast furnace wears during a campaign. This furnace was blown with six tuyers and was equipped with a bell and hopper, seal, etc. It was lined throughout with fire brick, being 55 feet high and 16 feet in diameter at the bosh. It was erected in 1875-6.

Fig. 5 represents the Warwick furnace as it is to-day, an iron shell carried on cast iron columns with thin bosh walls, protected by bosh blocks. The furnace is 70 feet high, 16 feet in diameter at bosh and is blown by seven tuyeres, the details of its operation being given on pages 86 to 93.

The furnace was remodelled to the general design shown in 1887, but modifications were made in 1892, and these are embodied in the illustration.

These five figures aptly show the stages of development through which the anthracite blast furnaces passed, and emphasize the great increase in size and capacity, and changes in arrangement. While Figs. 4 and 5 show larger furnaces, these seem small compared with those that will be illustrated on page 62, which represents two coke furnaces. Some of the changes in structure are described in the following pages.

### *Top of Furnace or Tunnel Head.*

Originally the inwall of the blast furnace was drawn in so as to have the top opening three feet in diameter, over which was placed a plate with a hole about two feet in diameter, through which the materials were fed to the furnace, as the possibility of driving the furnace more rapidly became apparent, the necesity was recognized of having the materials held in the shaft of the stack for a sufficient time to heat them and allow the gases to act upon the ore. By the enlargement of the upper portion of the furnace its cubical capacity was considerably increased, but with this enlargement it became necessary to distribute the stock so as to have it descend regularly in the furnace and to prevent channeling by gases, etc. This was accomplished by the introduction of the bell and hopper described elsewhere.

At the commencement of the era of development most of the fur-

naces had their tunnel heads covered by what is termed the "head house," a structure which extended from the furnace to the bank on which the charges were made up and which contained the weigh scales and sufficient ore and flux in bins and fuel in barrows for the night's run. At the close of this era the prevalence of circular masonry or iron shell stacks, standing independently of the bank, and the common practice of assembling the materials at the base and elevating them to the top of the furnace by machinery had practically made obsolete, the custom of dividing the work between the day and night shifts unevenly.

*Crucible.*

The hearth or crucible of a furnace as hereinbefore described was originally constructed of large blocks of cut sandstone neatly jointed and depending principally upon the masonry structure of the stack proper to withstand the expansive forces from within. As experience demonstrated that thick walls were not desirable and that it was of advantage to conduct the excessive heat away, the crucible and boshes were built independently of the furnace walls, the former being secured by a system of bands and braces so as to leave air space between the crucible and the stack masonry. When brick columns were used still more room was given, but it was not until iron columns were introduced that free access to the hearth, crucible and boshes was possible. In fact it has only been within late years that the columns have been made sufficiently high to completely expose the crucible and boshes.

The small crucible referred to in the older furnaces was carried to a height of from five to seven feet, with slightly tapering walls to meet the slope of the bosh, which was ordinarily quite flat, the lower portion of the furnace being practically of the form represented by an ordinary saucer resting upon a tall, narrow glass. Finding that the masonry of the interior of the stack was rapidly destroyed so as to enlarge the crucible and steepen the boshes; the crucibles were made of greater diameter and of smaller height, the inclination of the bosh being changed accordingly, and in newer furnaces the bosh level was raised. When but from two to five tons a day were made in a furnace, the iron being collected in a fore hearth and the cinder allowed to flow off continuously, the necessity for room in the crucible to hold molten metal did not require that the tuyeres should be placed at more than from 15 to 20 inches above the hearth level, the tymp stone or plate, which separated the fore hearth from the crucible proper, and under which cinder was tapped, being from 3 to 6 inches lower. As the capacities of blast furnaces were increased, the size of the hearth enlarged, and the number of tuyeres augmented, the distance at which tuyeres were set above the furnace

bottom was materially increased, particularly after closed fronts came into vogue. What were practically known as open front furnaces succeeded those using the forehearth, the construction of the open front being a cast iron dam plate, either solid or supplied with water coils set flush with or recessed into the front of the furnace, the tapping hole for drawing off the molten metal being provided in this plate. Immediately above the dam was a recess formed of side and top plates in which rested a tymp plate, also water cooled. The tymp plate setting back in the recess left an opening of considerable size between it and the dam; this opening was covered by a weight plate held in place by weights or by a screw jack. When the cinder rose sufficiently in the furnace, the weight plate was removed and an opening made under the tymp plate through which the cinder flowed. When the furnace worked unsatisfactorily, blast was shut off and the entire opening between the dam and tymp plates exposed, which gave access to the interior of the furnace, and through this opening imperfectly reduced material or excessive fuel were removed. This was considered as "working the furnace." It is probable, however, that what was taken out of this opening, which was to the disadvantage of the furnace, was much less than the quantity of materials which would improve its operation. In other words the open front wasted good fuel in excess of any improvement which it gave to the operation of the furnaces, but it was an apparent necessity at a time when so little was really known concerning the chemistry of the blast furnace process, finding a parallel in the contemporaneous medical practice of blood letting, etc.

The practice of allowing the cinder to flow continuously has become obsolete, one merit claimed for this practice being that by removing the fresh cinder as fast as formed it prevented any material absoption of impurities by the molten iron. The custom soon changed to allowing the cinder to accumulate until it was well up towards the tuyere level, when it would be tapped off in "flushes," and it was generally also withdrawn just before casting. As the blowing pressure increased to meet the enlarged hearth, and as the height of the tuyeres above the hearth level was raised, the quantity of cinder run off at a flush was augmented. The removal of this cinder was accomplished in a number of ways, some furnaces using the old method of dragging it out with hooks, others ran it into long gutters where it was broken up, thrown into carts and removed. In other cases nearly hemispherical holes were made outside of the casting house in which U shaped irons were placed, the molten cinder cementing itself around the iron, permitted them to serve as staples for lifting the cinder pots by means of a crane. After these pots had been carted to the dump the cinder could readily be broken from the staples so that they could serve for further similar use.

An improvement upon this was in the use of iron cars. These were generally made so that the top portion represented the sloping sides of a rectangular or circular box and the bottom portion was a flat plate carried on the car trucks. The box having been placed upon the plate and luted with clay, the cinder was run into it, and when the car reached the dumping ground, or as soon as the surface of the cinder had congealed sufficiently, the top was lifted off and the block of cinder either pried from, or where the tilting frame was used, slid off of the plate. Some of these box cinder cars were provided with tapping holes in the sides through which the molten cinder was allowed to run.

### *Changes in Furnace Equipment.*

In the evolution of the blast furnace from the cold blast charcoal stack with a bosh diameter of 8 to 10 feet, a height of from 25 to 40 feet and a crucible which, at the start of the campaign, had an area in cross section of from 4 to 6 square feet; to the massive structures of the present time, with boshes 20 feet or more in diameter, the stacks towering to a height of over 90 feet and with crucibles from 100 to 150 square feet in area, the changes were gradual. Up to the close of what may be considered the era of development, and which may probably fairly be taken as coincident with the Centennial Exposition of 1876, the blast furnaces of Pennsylvania had practically passed through all the intermediate stages as far as mere dimensions are concerned. This era covers an increase in output in the average furnace of from 4 to 40 tons per day, there being however individual instances where the latter amount was exceeded.

The blowing machinery had developed from wooden cylinders, or engines with small horizontal iron cylinders, to massive constructions, both vertical and horizontal, having air cylinders from six to nine feet in diameter wth stroke of from four to eight feet. In fact, some of the largest blowing engines connected with Pennsylvania blast furnaces were erected before the close of the interval described as the era of development, subsequent improvements being in designing machinery which could be operated at higher speeds and, consequently, supply larger volumes of air, in strengthening parts to permit of using stronger blast pressure and in working both steam and air cylinders to secure increased economy of operation. The engines in use in 1876 embraced most of the forms now employed. Some were horizontal, some vertical, the latter being coupled direct or through beams, and at some of the charcoal blast furnaces wooden blowing tubs operated by water wheels were still employed.

The iron pipe hot blast stoves had been greatly improved, gases

being consumed in combustion chambers before passing into the pipe chamber, but beyond the shortening of the boilers, but little change in steam generating appliances were noted other than in the means of applying gas under boilers. Vertical hoists had very largely displaced inclined planes, these hoists being operated by "water balance," i. e., by pumping water into the hollow bottom of the upper cage to overcome the weight of material which was being carried upon the other cage to the top of the furnace or the cages were operated by means of blast pressure introduced into cylinders of practically the same height as the furnace, or they were raised and lowered by steam winding engines. This resume and other data following, showing some of the changes in blast furnace equipment during the era of development, are submitted with the object of offering comparisons between the operation of the older charcoal furnaces already detailed, with the arrangement and methods which prevail in the more improved furnaces of the present time which will be treated of in the next subdivision.

### *Iron Pipe Hot Blast Stoves*

Heated blast was first applied to the blast furnaces in Scotland in 1822 and its use gradually spread, this improvement being introduced in Pennsylvania about, or slightly before, 1840.*

At first the blast was heated in an oven in which a series of horizontal cast iron pipes were placed, the air from the blowing machinery being heated by passing back and forth through these pipes, the combustion of wood or coal fires in the ovens supplying the heat to raise the temperature. Subsequently, the hot blast pipes were placed in chambers located as previously shown on page 50, on the top of the furnace stack. A flue from the upper part of the shaft of the furnace connected with a chamber in which the resulting gases were burned to heat the pipes and for convenience of arrangement inverted "U" shaped pipes were placed in a vertical, or nearly vertical position, the ends resting upon main bed pipes on the opposite sides of the chamber, thus forming practically a pipe arch over the fire. Up to this application, all of the gases resulting from the operation of the blast furnace were permitted to escape through the tunnel head opening. If the top of the furnace was hot enough these gases ignited upon having access to the air, but in the absence of such action the attendants applied fire as a means of protecting themselves against asphyxiation. As a consequence the flame from the tunnel head of a blast furnace was a constant beacon to the surrounding country as long as the furnace was in operation and even after the hot blast pipes were placed at the tunnel head the

*The first hot blast stove in the United States was introduced in New Jersey in 1834, the waste heat from the tymp or fore hearth being passed over horizontal pipes.

excess of gas supplied to them permitted a considerable flame to play about the draught stacks of the hot blast ovens.

The iron pipe hot blast stoves vary considerable in size, design and number of pipes, their arrangement upon bed pipes and the manner of burning the furnace gases.

In section the cast iron pipes are circular or eliptical, (the walls being from one inch to one and a half inches thick), sometimes divided by a diaphragm cast in the pipe, or one pipe of smaller area is inserted in a larger one, the air passing in through the smaller pipe and out by the annular space between the two or passing first up one side of the diaphragm and then down the other. Where the double or diaphragm pipes were used they were generally upright columns sometimes swelled at the top, but the majority of cast iron hot blast pipes are U shaped, the ends connecting two bed pipes.

A form much approved bears the name of "Durham," having been first applied at the Durham furnace; it consists of inverted U pipes arranged in a chamber and connected with each other through small bed pipes, that is with the exception of the end pipes, two standing pipes only connect with each bed pipe. The Durham stove also differs from most of those formerly used by placing the combustion chamber at one end of the stove, and drawing the heat through the pipe chamber instead of having the combustion chamber below the pipe chamber. The use of end combustion chambers, however, did not originate with the Durham stove, as it was applied to other stoves prior to the introduction of this form.

Another modification which was introduced about the close of what has been termed the era of development but which has been applied to but a limited extent was reversing the position of the pipes and suspending them from above, thus, U.

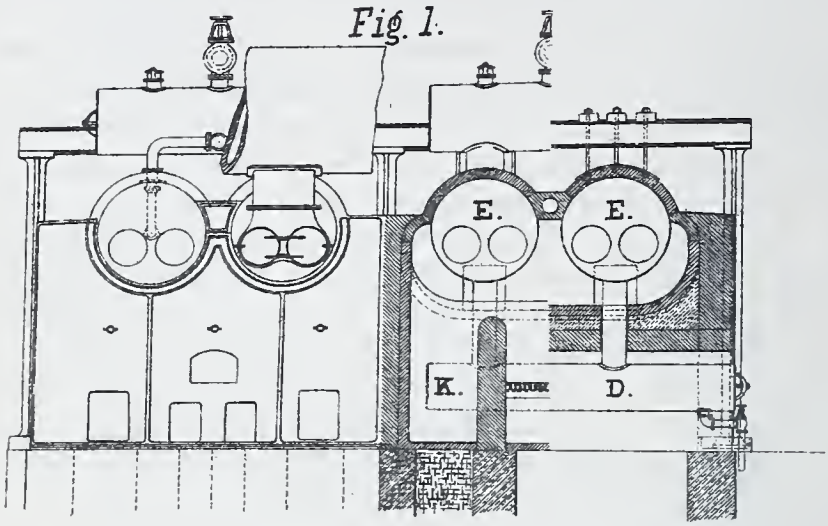
The iron pipe hot blast stoves could not be depended upon to raise the temperature of the blast above 1,000 degrees, F., and this was only exceptional, 800 degrees to 850 degrees being the normal result obtained from stoves of good design and proportioned to the size of furnace and blowing machinery.

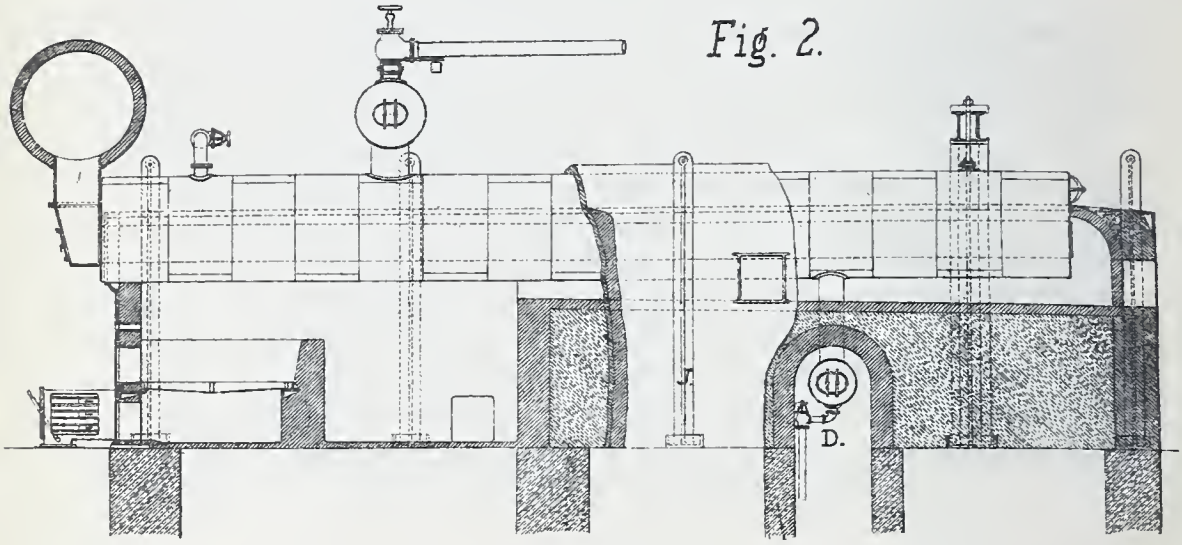
The above description, taken in connection with the hot blast stove illustrated on page 50, will give a general idea of the arrangement, but most of the new furnaces are now equipped with fire-brick hot blast stoves, which are described on pages 78 to 80.

### *Boilers.*

As steam displaced water power as a means of operating the blowing apparatus, boilers were placed so as to draw the gases from the tunnel head, the combustion of these gases generating the steam. In some furnaces which continued to use cold blast, the boilers were the only claimants for a gas supply, but in others where the hot blast

## DOUBLE FLUE BOILER SETTING FOR BLAST-FURNACES.



and steam were both employed, the gases passed first under the boilers and thence to the hot blast stoves or were divided by flues which carried part of the gas to the boilers and part to the hot ovens.

Fig. 2 (page 50), shows the gases passing from the tunnel-head to the boilers and then to the hot blast stove.

To enumerate the forms of boilers which have been or are used in Pennsylvania blast furnaces would be to rehearse the changes which have taken place in the form of steam generators, except such as were adapted to economize space and fuel as is required on steam vessels. Three types, however, were prominently associated with blast furnaces during the era of development.

1st. Plain cylinder boilers of diameter from 36 to 54 inches. Many of these were constructed of lengths of 60 feet or over, but the risk due to strains from unequal support has caused the lengths to be reduced greatly. These boilers were set in nests and connected with transverse mud drums.

2d. Double cylinder boilers of similar diameters to the above, i. e., an upper boiler connected to a second boiler placed below it. The lower boiler being set back of the bridge wall.

3d. Flue boilers, the shells being from 42 to 60 inches in diameter, the flame passing under the shell, returned forward through two and sometimes three flues to a smoke stack. These boilers, by reason of the risk to collapse of the flues, are much shorter than the cylinder boilers and they are often provided with mud drums.

The superposition of the hot ovens and boilers on the blast furnace stack required that the area of the top should be increased, and this was accomplished by augmenting the length of the sides and also throwing arches from the furnace stack over to the adjoining bank, (page 50). In some instances where furnaces were not built close to banks but obtained their supplies of raw material by means of inclined planes or vertical hoists, which carried the ore, fuel and flux from the ground level to the tunnel head; a series of massive piers and arches were constructed to sustain the boilers and their setting, and the hot ovens, with the necessary draught stacks. Some blast furnaces now in operation in this State still have the boilers and hot blast stoves so elevated on masonry, built at great cost, fifty feet or more in height.

The next step was to conduct the gases from the top of the furnace to the ground level so as to do away with the expensive masonry structure necessary to support the furnace equipment, and the simple plate which was used to cover the tunnel head so as to more thoroughly divert the gases before entering the hot oven, was applied in connection with chimnies which reached from the ground level to a point above the top of the furnace stack to draw the gases through suitable pipes or tubes to the hot blast ovens and boilers placed at ground level.

The tubes extending from the top of the furnace to near ground level are known as "down-takes" or "down-comers," and to these were connected branch flues leading to boilers and hot blast stoves, suitable provision being made for catching and removing the dust carried over with the gas, and explosion doors being located so as to relieve the flues of undue pressure in case of gas igniting in them. To facilitate the direction of the gases into the down-takes, thimbles were placed in the throat of the furnaces as shown by Fig. 3, page 50, and kept full of stock so as to offer more obstruction to the gases than the flues and, in some instances, a lid fitted over this thimble. Methods of sealing the top of the furnaces are described on page 77.

*Tuyeres and Water Blocks.*

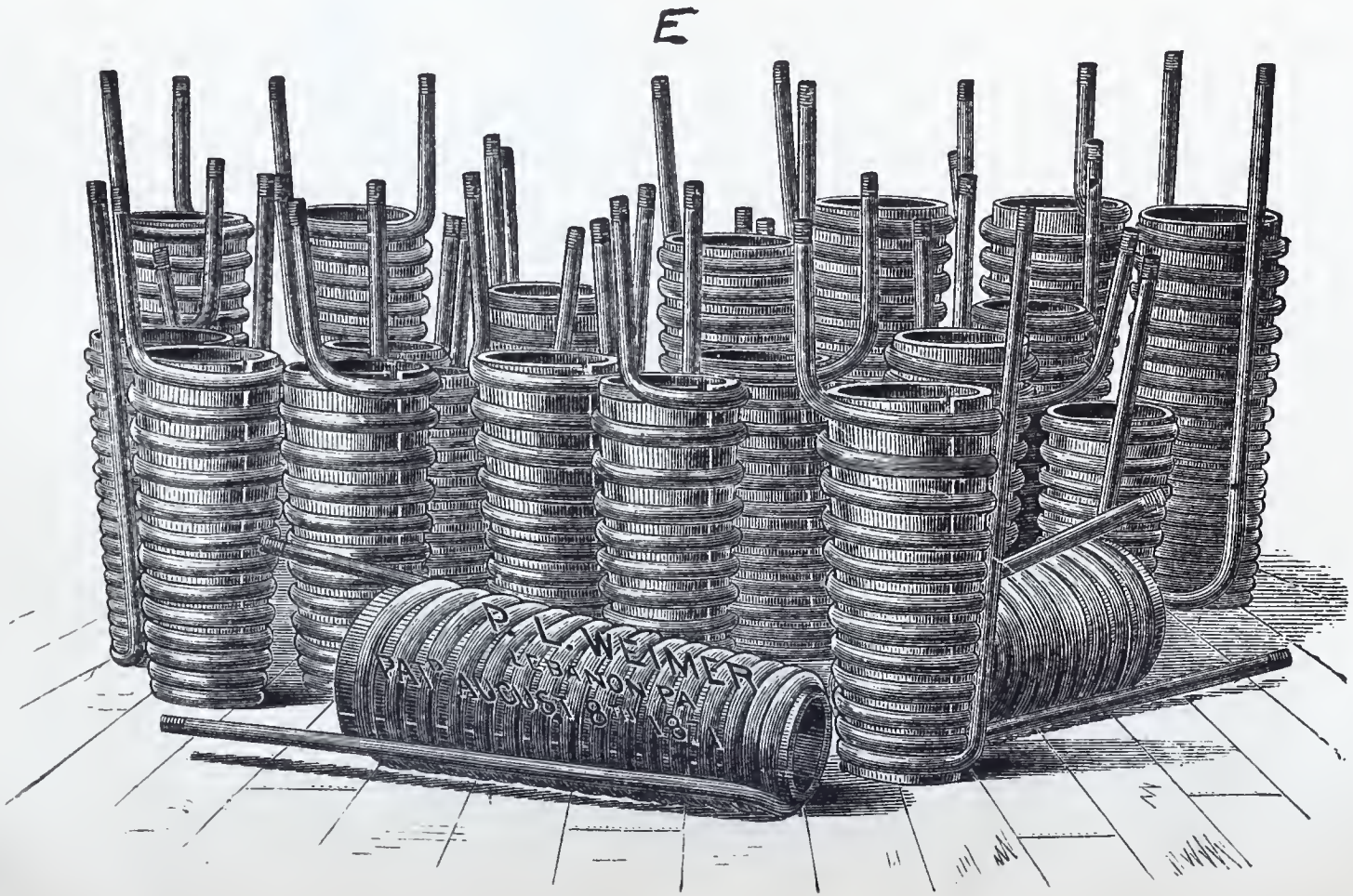
The tuyere originally was a section of a conical pipe made of clay or of iron, luted into the masonry of the crucible, and into this was inserted a blast nozzle or belly pipe, leaving an annular space between the outside of the nozzle and the tuyere proper, through which a considerable amount of air was drawn into the furnace by the blast under pressure acting as an injector, or through which, in case of a "tight" furnace a large amount of the blast found its way out into the tuyere arch. The circular pipe gave place to shaped pipe, water circulating through hollow walls to keep it cool.

Next followed the hollow cast iron tuyeres, some with a water pipe leading up to the nozzle and others with cast iron partitions, which caused a forced circulation of water. Then a wrought iron pipe generally one inch in diameter, was coiled so as to form a tapering tuyere, and about it iron was cast as a protection.

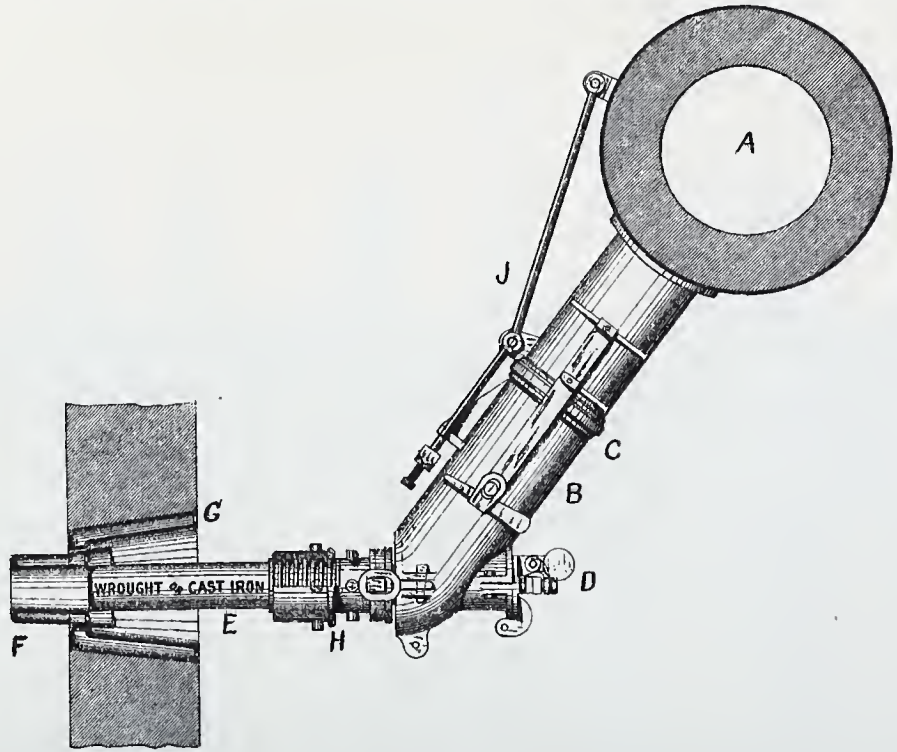
Subsequently cast iron forms were prepared with spiral grooves to receive the pipe when coiled, the forms being split longitudinally so as to offer sufficient elasticity for the expansion and contraction of the pipe. The coil tuyeres are still liberally used, but a majority of Pennsylvania furnaces are equipped with hollow bronze nozzles set into water blocks, which are practically large coil tuyeres.

The employment of water blocks, however, is not confined to the use of bronze nozzles, for soon after the improvement of blast furnaces took prominent shape it was found advisable to abandon the open tuyere and the space between the nozzle and the tuyere proper was luted with clay. The influx of cold air through the open tuyere had preserved it, but when the tuyere was closed, the active combustion in the crucible rapidly destroyed its noze and when, to obviate this the tuyeres were water cooled, the fire brick or stone masonry immediately about the tuyere arch received the attack and to preserve this tuyere blocks were inserted either as solid castings, as castings with partitions through which water circulated, or as cast-

# SHELL COIL BLAST-FURNACE TUYERE.



TUYERE WATER BLOCK AND TUYERE CONNECTIONS.



ings encircling water pipe coils. Subsequently, the bronze tuyeres were made to fit snugly to a joint with the water block, and at present a bronze block often forms the joint between the water block proper and the tuyere nozzle.

### *Top Fixtures*

As the furnaces increased in size, the tunnel head opening was widened and it became desirable to have some better means of closing this than an ordinary plate. This was found in what is recognized by the trade as the "bell and hopper," or "cup and cone," which is now almost universally applied not only to the blast furnaces of Pennsylvania but also of the world. This consists of a hopper with sloping sides into which the materials fed to the furnace are dropped, but they are kept from falling into the shaft of the furnace by a bell shaped casting which fits against the hopper bottom. This bell performing the double function of sealing the furnace, so as to divert the gases to hot blast and boilers, and of distributing the material more or less evenly over the area of the furnace shaft, when the bell is lowered at proper intervals.

Various methods of hanging or moving the bell resulted, hand winches, hydraulic rams, air or steam cylinders were attached to the end of the lever opposite to that from which the bell was suspended. A double bell was also introduced in the larger furnaces, this was a fixed hopper and a central bell either fixed or movable, so proportioned as to leave an annular space between the two, into which was fitted a ring with sloping sides, the object being to distribute the ore, fuel, etc., with uniformity over the throat of the furnaces. Means for sealing the top of the furnace so as to maintain a regular flow of gases, when the bell was dropped, were also introduced.

### *Furnace Capacities at the Close of the Era of Development.*

The development in size of blast furnaces during the 36 years which have been considered as covering the era of improvement was very marked, some quite large plants having been erected, but blast furnaces averaging 15 to 17 feet in diameter at the bosh, and 60 to 70 feet high represent with few exceptions the maximum dimensions, and although some excellent results were obtained, furnaces of the dimensions given seldom exceeded a production of 250 to 300 tons per week, or produced pig iron with a consumption of less than 3,500 pounds of fuel.

The following statements of results obtained at some Pennsylvania blast furnaces using mineral fuel and the prices obtained for

iron may fittingly terminate the discussion of this branch of the subject. They are excerpted from Volume L, of the Second Geological Survey of Pennsylvania and indicate the size of blast furnaces, character of ores and fuel used, pressure and temperature of blast employed, the output and grade of pig iron and the quantity of fuel consumed, at the close of the era of development.

"In the Engineering and Mining Journal of June 27, 1874, a table is given of the work of furnaces using anthracite coal. The average consumption of coal for one ton of pig iron from 1869 to 1873 was 1.98 tons. The ore averaged 44 per cent. The heat of blast is given as 900 degrees, F."

"In 1876 the Glendon Iron Works, Easton, Pa., reported size of furnace 18x72 feet; pressure of blast, 6 to 6½ pounds; ore yield. 50 per cent.; anthracite coal used, 1.29 gross tons per ton of metal; make per week, 289 tons.

"The Bethlehem iron and steel works reported: Furnace No. 1, 15x65 feet, blast 4½ pounds, anthracite coal used, 1.72 tons to one ton of Bessemer pig iron.

"Furnace No. 2, 15x45 feet, blast 4½ pounds, 1.84 tons of anthracite coal used per ton of mill pig iron.

"Furnace No. 3, 14x50 feet, blast 6 pounds, 2.00 tons of anthracite coal used to one ton of gray foundry pig iron.

"Northampton furnace, 16x65 feet, 1.73 tons of anthracite coal to one ton of Bessemer pig iron, blast 7 pounds.

"Lochiel furnace, Harrisburg, 14x50 feet, two tons of anthracite coal to one ton of No. 2 mill pig iron, blast 4 pounds, the furnace making 18 tons per day.

"The Bennington furnace of the Cambria Iron Company, 10x40 feet; blast, 2½ to 3 pounds; temperature of blast 600 degrees, F., running on a mixture of Lake Superior and native hematite ores, averaging 56 per cent. of metallic iron, produced Bessemer pig iron using an annual average of 1.3 tons of pit coke to one ton of pig iron."

"The Lucy and Isabella furnaces at Pittsburgh made the following records, which were then phenominal:

| | Lucy Furnace. | Isabella Furnace. |
|---|---|---|
| Height of stack, | 75 feet. | 75 feet. |
| Diameter of bosh, | 20 feet. | 20 feet. |
| Pressure of blast, | 4 to 8 lbs. | 4 to 8 lbs. |
| Temperature of blast, | 750° to 1,000° F. | 800° to 1,000° F |
| Lake Superior ore yielded, | 62 per cent. | 62 per cent. |
| Pig iron made for week ending Oct. 16, 1875, | 762.482 tons gray forge and No. 1 foundry. | 714.547 tons, ⅓ foundry, balance mill. |

In ordinary work the Lucy furnace is reported to have used with strictly first class coke, from 3,300 to 3,350 pounds per ton of iron made. This gives 1.47 gross tons of coke to one gross ton of pig iron. The Isabella furnace is reported as using when making foundry iron, 1.16 tons of coke, running on mill iron 1.07 tons per gross ton of metal.

Shoenberger, Blair & Co., Pittsburgh, in a furnace 13x62 feet, with blast pressure of 3 to 5 pounds, and temperature 800 degrees to 850 degrees, F., ores 57 per cent. used 1.16 to 1.25 tons of coke to one gross ton of pig metal.

Dunbar furnace, in the Connellsville coke region, 16½x58 feet; blast, 5½ pounds; temperature, 750 degrees, F., running on native carbonates with a mixture of Lake Superior ore, used 1.58 tons of coke to one gross ton of pig iron.

Neshannock furnace, New Castle, Pa., 15x60 feet, with a blast pressure of 3 to 3½ pounds and a temperature of 800 degrees, F., made 300 tons a week from Lake Superior ore. Coke, 1.33 tons for foundry iron, and 1.50 tons to one gross ton of Bessemer pig iron.

Kemble Coal and Iron Company, Broad Top, furnace 16x65 feet; blast pressure, 5½ pounds; temperature of blast, 800 degrees, F.; ores, 30 to 35 per cent.; 1.9 tons of coke to one gross ton of pig iron.

Cambria Iron and Steel Company, Johnstown, Pa., furnace 15x70 feet; blast pressure, 4½ pounds; temperature of blast, 700 degrees, F., running on native carbonate calcined iron ore, used 1.35 tons of coke to one gross ton of pig iron.

The Briar Hill, or block coal of the northwestern corner of the State used it as it comes out of the mines, in the Sharon furnaces, 50 feet high, required about 2¼ to 2½ tons of this coal to one ton of pig iron, from 66 per cent. Lake Superior ores." The pressure of blast was 7 pounds. To the above the following may be added.

The Durham blast furnace whose performance when using charcoal was referred to on page 29 was not rebuilt until 1848-50, when two anthracite blast furnaces were erected to use the local ores, and the record of these is preserved in the history of Durham township. These stacks were constructed of stone lined with fire brick and were 40 feet high with bosh diameters 13 feet and 14 feet. Subsequently they were enlarged to 15x48 and 16x50 feet, and remained in operation until 1874. It is estimated that the entire output of these two furnaces from the time of their erection was 178,000 gross tons of pig iron, with an average weekly output during the actual time in blast of 100 gross tons for each furnace. It required about two gross tons of anthracite coal, 4,800 pounds of ore, and 1,900 pounds of limestone to produce one gross ton of pig iron. The total stock consumed by these furnaces can, therefore, be estimated as follows:

| | |
|---|---|
| | 356,000 gross tons coal. |
| | 382,700 gross tons ore. |
| | 151,300 gross tons limestone. |
| Total for 25 years, ..... | 890,000 |

Anthracite coal was brought to Durham on boats from Mauch Chunk through the Lehigh and Delaware division canals; the limestone was quarried and ores mined from the property.

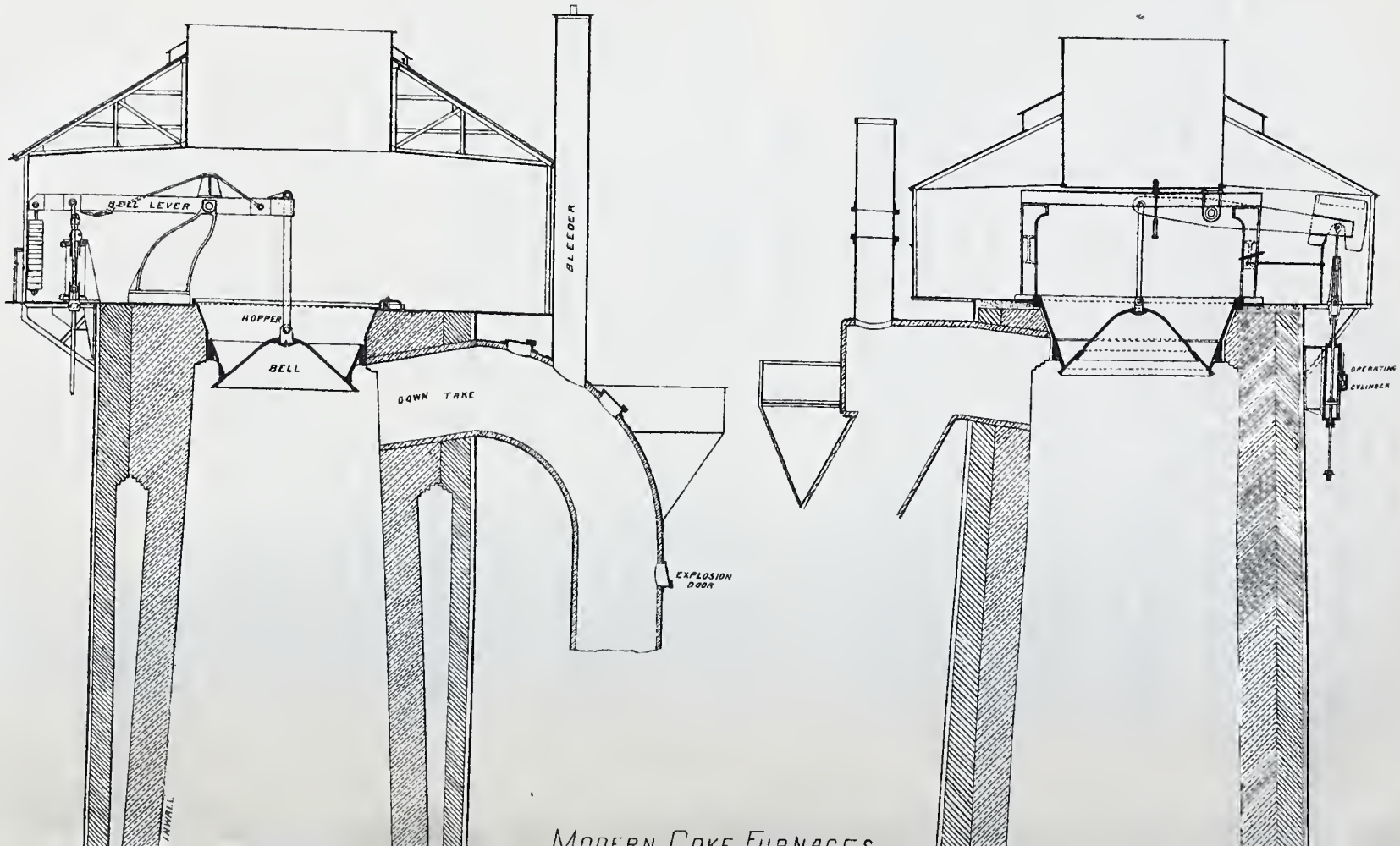
In Mr. W. G. Neilson's chart prepared for the Centennial Exposition in 1876, the price of No. 1 anthracite pig iron per gross ton at Philadelphia, is given from 1842 to 1866, the highest average yearly price in this period being $59.25 in the year 1864, while the maximum monthly average was $73.62½ in August of that year. The lowest average yearly price in these twenty-five years was $20.25 in 1861, the minimum monthly average being $18.62½ per ton in October of the same year. Since this table was published, however, the prices have fallen, the lowest yearly average being $12.66 in 1894, and the minimum monthly average $12.00 in February, 1895.

## THE TECHNICAL ERA.

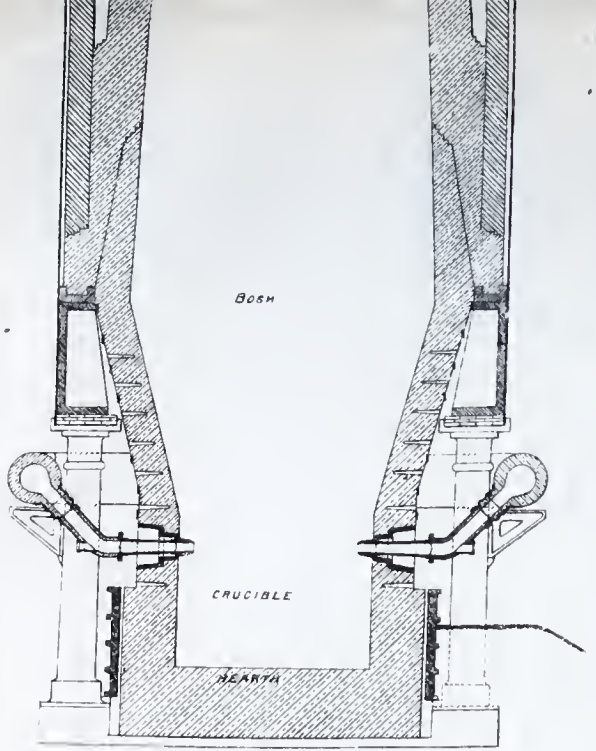
Having considered the application of mineral fuel in the blast furnace during what has been designated as the era of development, the next step will be to describe the newer structures and the practice now prevailing to indicate the changes which have taken place. The general form of the blast furnace stack now in use is the same as in the preceding era, modified by changed proportions the structures having been altered by the introduction of methods of brick preservation, etc., and by increasing the strength of various parts. The general description of the blast furnace and its functions in preceding pages will, therefore, be supplemented by data as to subsequent improvements.

What is at the present time considered a "modern" blast furnace plant, consists of from one to nine furnace stacks, situated either near to or at a good market for its product, and where ores and fuel can be readily assembled; or convenient to supplies of ores and fuel, with cheap transportation to a market. The furnace stacks and the buildings connected with them which make up the plant, are so arranged that the materials coming to the works, the operation of the furnaces and the manufactured products, can be handled with the greatest economy, this as well as the site for the plant being carefully studied out before the structures are located.

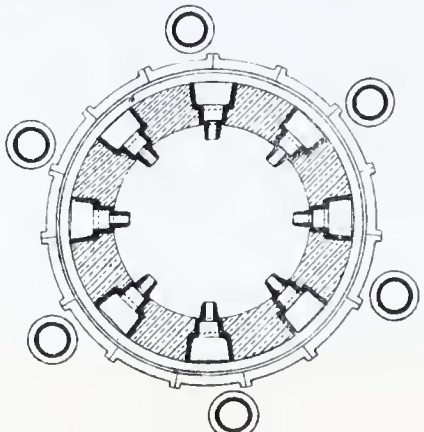
A number of the plants now active are deficient in some of the essentials and many of them located years ago, have outgrown local ore deposits, changed the fuel supply, or produce iron for different



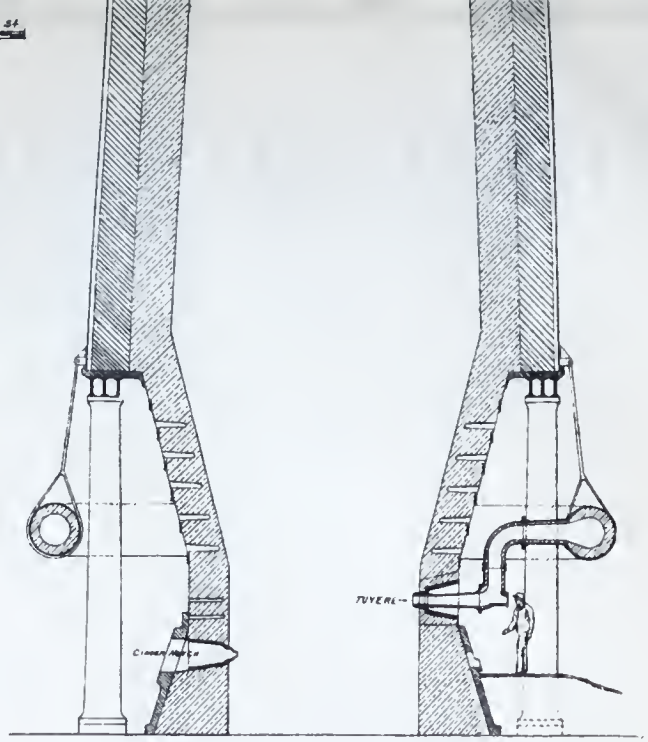

Modern Coke Furnaces



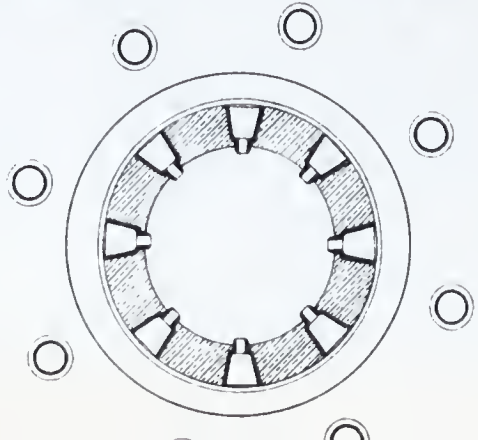

COLEBROOK FURNACE No. 2



SCALE IN FEET




EDGAR THOMPSON FURNACE "F"



markets than formerly. The altered transportation facilities which permit of carrying ore, fuel and pig iron hundreds of miles at prices which had been previously paid for hauling short distances by teams, have given continued life to some plants which otherwise would be crowded out of business. There are also some locations which are and which will continue to be handicapped by errors in the original selection of a site, or which suffer for the want of competition in transportation facilities. In this connection it may be remarked that a number of Pennsylvania blast furnaces have been, and are, at a disadvantage in meeting the inroads of pig iron made elsewhere and brought into the State, by reason of the disparity of freight rates which have prevailed in Pennsylvania and in other localities. Similar conditions affect certain districts within the limits of the Commonwealth, which are forced to pay higher tolls on ores and fuels than are charged for pig iron covering the same distances.

A considerable number of the blast furnaces of the State are operated in connection with steel works, rolling mills, etc., either located adjoining or within easy connection, and some of which were established about a quarter of a century ago, own numerous houses which are rented to workmen engaged at the plant. Few of the later enterprises have attempted to provide homes for their men, but in lieu thereof the proprietors have supplied well arranged libraries, reading rooms and amusement halls at liberal expense.

Most of the blast furnaces erected during the charcoal era and many built during the era of development, owned or controlled iron ore mines from which all or a part of the supply was obtained, and a number of such holdings remain with the old or have been transferred to newer enterprises. Other plants have controlling interests in iron ore mines in other states, which are not operated under the same corporate or firm title as the furnaces. Similarly, coal mines and coke ovens are directly or indirectly assets of a number of important iron producing industries. There are, however, many blast furnaces in the State which have little or no interest in iron ore properties, and which buy all the fuel used from outside parties. Coke has grown so much in favor as a blast furnace fuel in late years, that it forms an important part of, or composes the entire charge of many furnaces; in fact it is absent from few furnaces using mineral fuel, and furnace proprietors now go into the open market and purchase their supplies.

In discussing the charcoal era reference was made to the wooded areas controlled by iron industries, and this need not receive further mention.

### *Changes in Practice and Equipment.*

The following are some of the prominent changes in practice and equipment which are credited to the technical era, but all of the

progressive features of blast furnace construction and operation cannot be enumerated here, nor is it essential that more than a mere summary should appear in addition to those which have been mentioned in the descriptions of the blast furnaces.

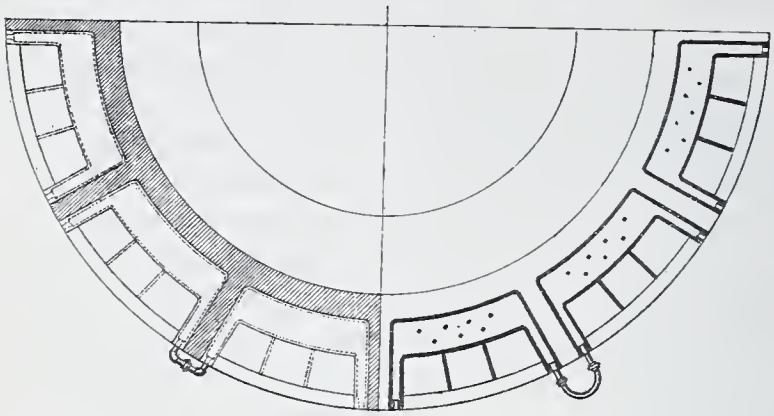
When it became desirable to increase the height of the furnaces, this was accomplished at some of the square stone stacks, by constructing the additional height as a brick cylinder secured on the outside by a series of buckstaves or bands, and later by a casing of sheet metal. But the great mass of masonry demanded when the stacks were constructed of stone, and the expense of securing such masonry by strong beams and ties against the expansion which naturally followed, led to the erection of blast furnaces in which brick took the place of stonework. The fore arch and tuyere arches were constructed between brick or stone piers distributed around the circumference of the circle, the space between two adjoining piers being arched over or covered by heavy cast iron plates or sows. Above the piers was the shaft of the furnace, built of brick masonry, (held in place by wrought iron bands), generally tapering from top of the piers to the tunnel head, the enlarged platform of which was supported by brackets. The substitution of iron columns for brick piers was a natural sequence, these columns supporting a heavy cast iron circular mantel ring upon which the superstructure of the stack was erected; and the substitution of the casing of iron or steel plates, for a series of bands or buckstaves transformed the upper portion of most furnaces into an iron cylinder or an iron cone frustrum, which was lined with fire brick and red brick, the lining resting upon the mantel ring.

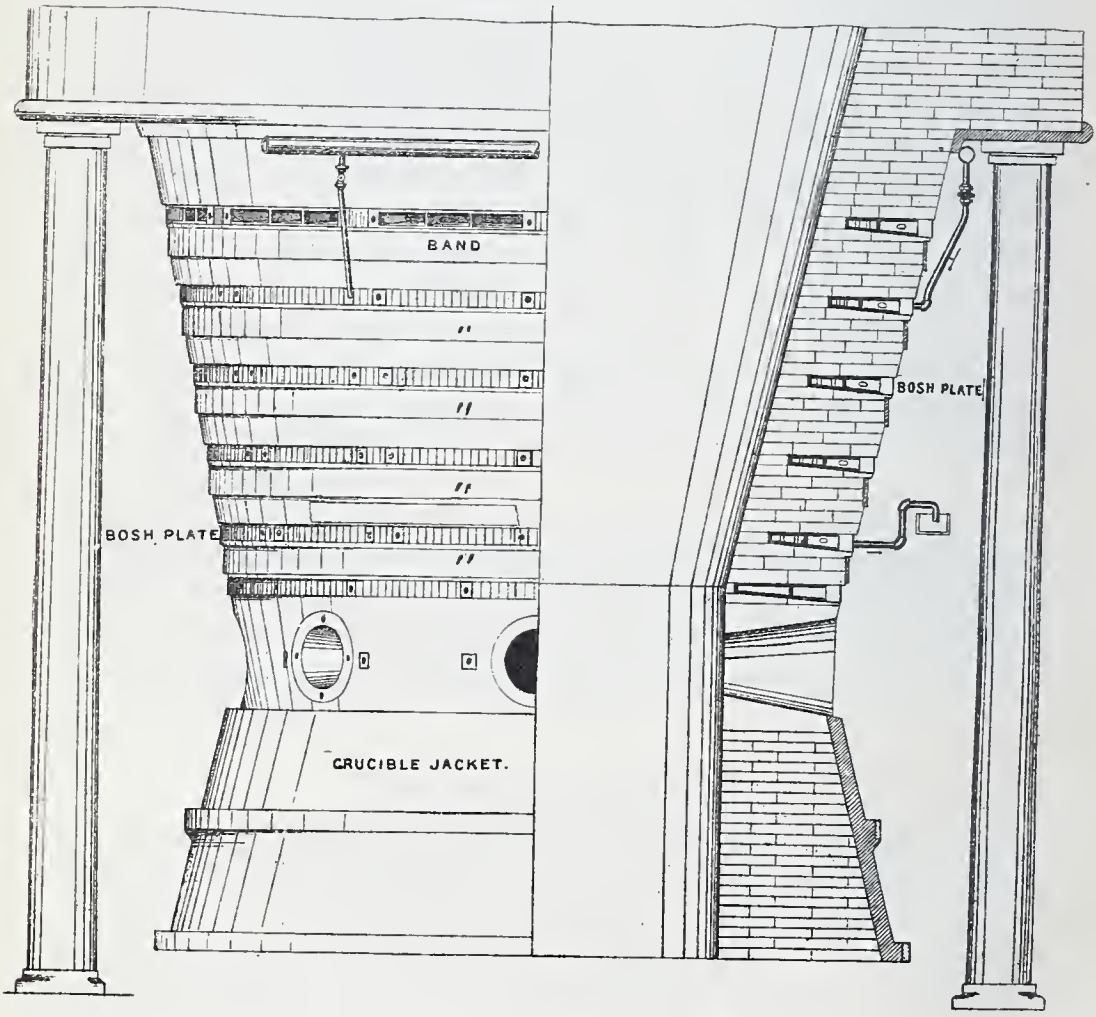
Numerous instances of square stone furnace stacks, either as originally constructed or as raised by the erection of brick superstructures were in use in 1876 and a few are still seen in Pennsylvania; the same may be said concerning brick banded stacks resting upon brick piers, and straight tapering iron shells supported upon cast iron columns.

### *The Modern Furnace Stack.*

The furnace stacks as now built are lined with fire brick, the inwall being surrounded by a wall of red brick with clay backing, which, in turn, is protected by a sheet iron, or steel casing, or jacket, resting (as does the inwall) on a mantel ring of cast or wrought metal which is supported on cast iron columns. The columns allow access to the bosh and crucible which are also constructed of fire brick masonry strengthened by bands or buckstaves, and, in order to insure longer life to the brick-work, and a consequently longer campaign; this masonry is surrounded by a water jacket, or fitted with bands or rings with cooling plates inserted in the walls of the cru-

# BOSH COOLING PLATE.





cible and bosh. Openings are provided in the water jacket if used, and in the crucible walls, for from four to eight tuyeres, a cinder notch from which the cinder is drawn off and an iron notch where the molten metal is tapped, all protected by water blocks and coils cast in plates.

In reducing the thickness of the walls about the crucible and bosh it became necessary, not only to hold them in place, but to cool them artificially; and this has been done by means of jets of water playing against the fire brick masonry, cast iron jackets (in which coils of pipe were cast), surrounding the brick work; or castings of iron or steel, gravel or broken brick being used to fill the space of several inches between the brickwork and the casing proper, and water permitted to percolate through the mass. Vertical or horizontal coils of pipe have also been inserted in the crucible or bosh walls, or the walls have been surrounded by an iron casing carrying a series of buckets or troughs kept filled with water. Later practice has been to insert bosh blocks at intervals in the masonry and it is essential that this portion of the furnace should be held in place by suitable bands and bracings. The accompanying cut exhibits the Gayley bosh plate inserted in the walls of a blast furnace bosh, also the means of supplying water to and taking it from the plates, the bands securing the brick work, and the heavy cast iron jacket and band below the tuyeres.

The closed front consisted of an opening of moderate size through which cinder could be tapped, the change from the large rectangular opening above described to the bronze notch two or three inches in diameter, now in use, being a gradual one. In the furnaces of the Cornwall district of Pennsylvania an opening of eight to twelve inches in diameter was provided, fitted with a hinged, weighted door, which in an emergency could be thrown open suddenly and large quantities of material blown out of the furnace by blast pressure.

In modern practice there has been a decided increase in the diameter of the tuyeres used for they pass larger volumes of air at greater pressure into crucibles of greater diameter. The tuyeres have also been placed farther from the hearth or bottom of the furnace and there is more distance allowed between the centre of tuyeres and cinder opening than formerly.

Fire brick is the best material which is practically and commercially available for the purpose of forming blast furnace hearths and linings and yet it is far from being perfectly satisfactory. In fact, the present method of driving blast furnaces has encouraged the statement, that no fire brick would withstand the action in a blast furnace crucible if the masonry was not cooled by water, and if a carbonaceous lining was not formed within the furnace early in the campaign to protect the walls.

Experiments with carbon and with magnesite brick, etc., are being made but at present the material in general use is what is commercially called fire brick.

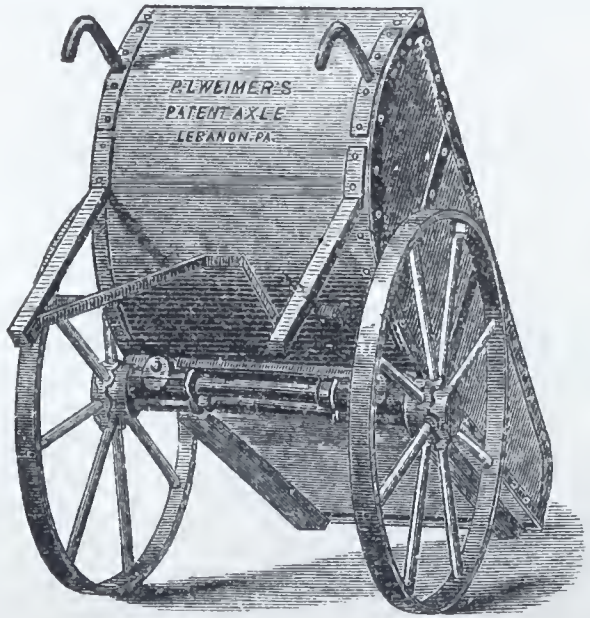
*Handling Stock.*

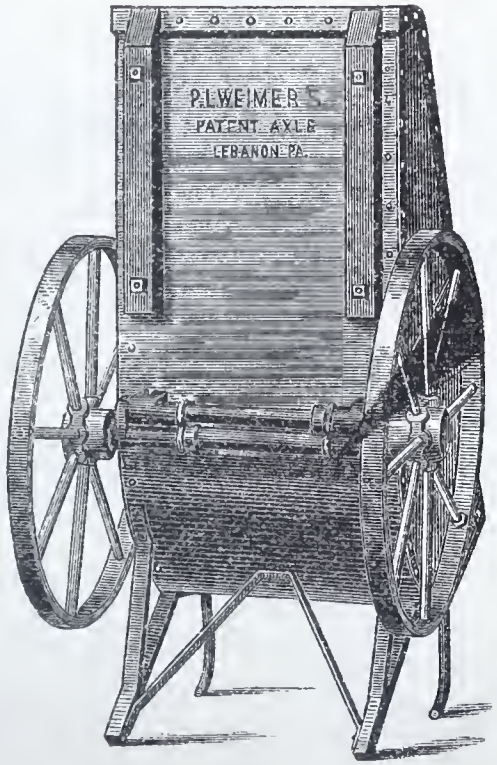
The raw materials are usually brought into the furnace stock yard or stock houses, in drop bottom or flat cars, the contents being discharged into appropriate pockets or bins or on piles. It is here that the "charges" for the furnace are made up and weighed, the necessary amounts of fuel of different kinds of iron ore and of the flux required, being carefully determined before hand. These charges are weighed on special scales to which they are carried in charging buggies or barrows, running on wooden or upon iron plate floors, and thus transported by manual power to the hoist tower or plane which elevates the stock to the top of the stack. In some instances the charges are assembled in the stockhouse and drawn up an inclined plane in a special car, which dumps its contents automatically onto the charging bell.

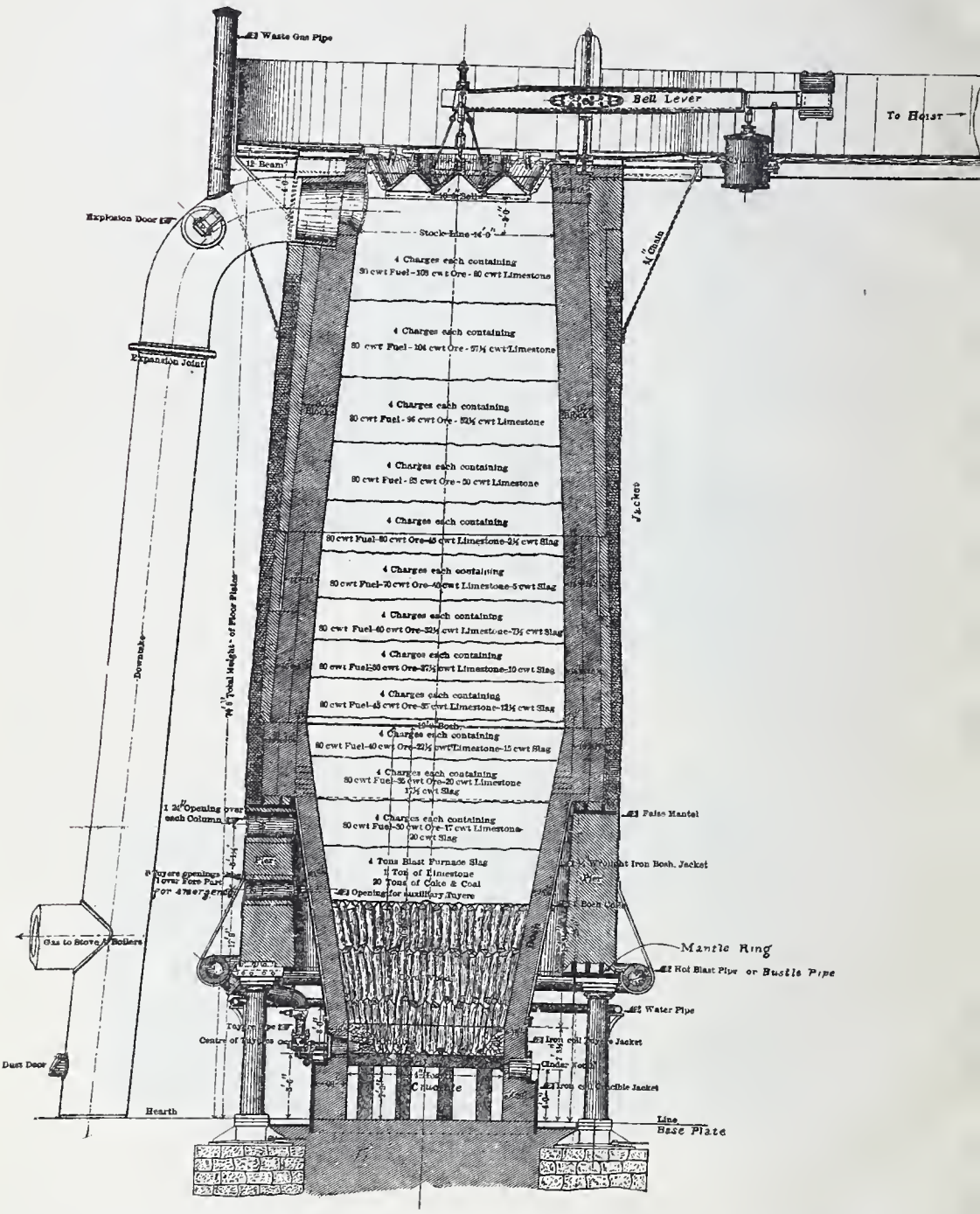
The majority of Pennsylvania blast furnaces are provided with stock houses to protect the raw materials, although in England and some of the Northern New York furnaces the trestles upon which the cars carrying the ore, flux and fuel are run, are exposed; the general practice being to discharge the materials from the cars which are run on trestles 10 to 20 feet in height. These stock houses are of large size, constructed usually either of iron or wood, the dimensions being dependent to a large extent on the facilities for maintaining a supply of raw materials for the furnace plant during the winter months. It is often considered good policy to carry a large amount of ore as an offset to strikes, and to be moderately certain of obtaining the desired ore mixture of approximately uniform chemical composition, which might not be the case if the ore was brought in as required from different mines. It is also advisable to have sufficient storage room to carry an extra stock of fuel, in cases of strikes, or of accident, this reserve being on hand to draw upon, so that it may not be necessary to "bank" or "blow out" the furnace. These extra stocks are kept in piles outside of the stock houses. If the ore comes in large pieces it is usually crushed in rock breakers or broken by hammers, and if of the carbonate variety, or if sulphurous ore is used, it is "roasted" in kilns or in heaps to drive off the carbonic acid gas or the sulphur.

Where large automatic skips operating on inclines are used they lift the ore, fuel and flux to the top of the furnace and drop it directly in the hopper, but at most furnaces the raw materials in the charging buggies are conveyed to the top of the stack in cages operating in a hoist tower located near to the furnace; from this the bar-

# CHARGING BARROWS.






Vertical Section of the Durham Blast-Furnace erected in 1876, showing the method of filling the stock in the beginning of a campaign.

rows are run out onto the "tunnel head" (an iron platform encircling the top of the stack) and discharged on the bell and hopper covering the throat of the furnace. This bell, as before described, closing against the hopper prevents the discharge of gases from the top of the furnace, and at proper intervals, when the hopper is filled with raw materials it is lowered, dropping the contents of the hopper into the furnace in such a way that they will be well distributed.

With the large size of stack now generally in use and the practicability of securing liberal shipments of ores of the desired quality, there is opportunity for a decided economy in handling the materials. Where ore comes in flat cars the load must be shovelled off, and even with the drop bottom cars considerable labor must be expended in discharging soft ores, especially in freezing weather. It seems possible to use a method employed with smaller mine cars, viz: run them into a revolving cage which empties the car by turning the cage, or to raise the flat cars to an inclined position and shoot the ore through removable ends as coal is now loaded into vessels on Lake Erie. The breaking up of the charge into barrow loads also seems unnecessary for large furnaces, where vehicles carrying a ton or more could be moved by locomotives, by cable or by electric trolley. A system of bins provided with sloping floors and doors, or the construction of stock piles over a framed tunnel in which chutes are provided, would obviate the necessity of shovelling much of the materials into buggies.

Having described the structure in use and the present method of feeding the material to it, the starting of a blast furnace on a campaign may be briefly referred to as a comparison to the older method heretofore described. (See page 26.)

### *Blowing in a Modern Blast Furnace.*

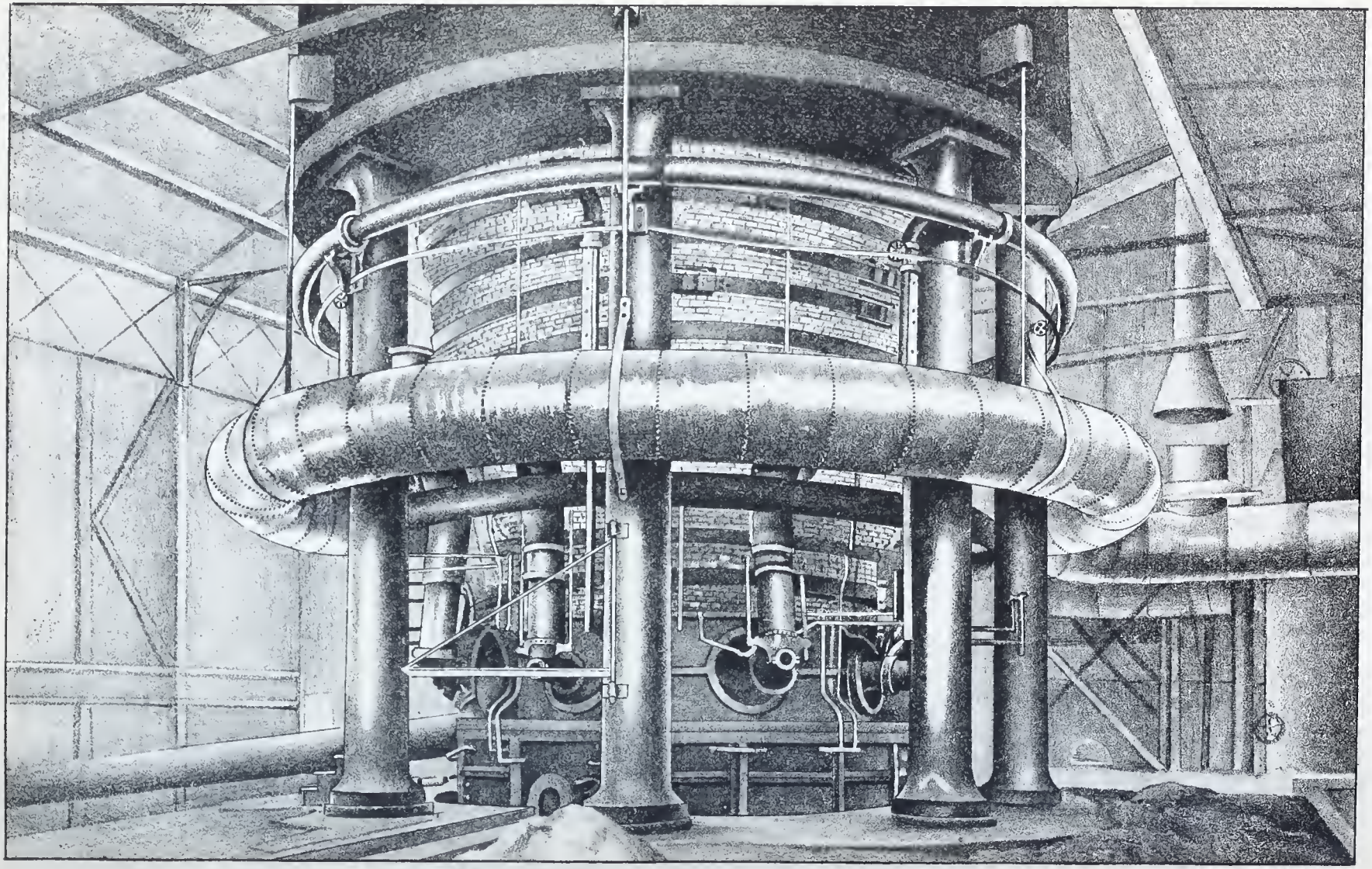
After a modern blast furnace has been properly lined, and all of the necessary machinery, etc., put in order, the interior of the stack is thoroughly dried out by means of a fire, generally of cord wood, or of natural gas if available, which is kept burning for several days. The crucible is then filled with kindling under a scaffold on which is placed successive layers of cordwood, and then the fuel which is to be used in the campaign, with some blast furnace cinder, then more fuel together with a small quantity of ore and flux, until the furnace is filled. (See page 67.) The fire is now lighted, often by the wife or daughter of one of the officials of the furnace company, and soon after it has been thoroughly ignited, the blast is applied, gently at first, and as the amount or burden of ore is increased the blast is also augmented, and a small cast is made in from twelve to twenty-four hours. (The boilers and hot blast stoves being fed with fuel until sufficient furnace gas is available.)

In describing the old charcoal blast furnace practice the method of filling was derailed, and as a comparison to this the procedure followed at the Durham furnace by Mr. B. F. Fackenthal is copied from the Transactions of the American Institute of Mining Engineers (Vol. XVIII, pages 379-391) "In filling a furnace a scaffold or cribbing of wood is put up to the tuyeres, leaving an open space underneath. Kindling wood is then put in front of the tuyere-openings, and the furnace is lighted all around. Immediately on top of the scaffold a layer of cord wood is placed horizontally; on the top of this, three tiers of wood resting on the ends, and on top of this, the bed of fuel. In one of the cuts (page 67) is shown a section of the Durham furnace as it was filled for the sixth, seventh and eighth blasts. In this figure, the packing between the bricks next the shell and the inwall, is not clearly shown, otherwise the drawing correctly represents the furnace as well as the filling.

A number of the parts of the furnace are also indicated as a help to the reader. This is offered as one method of filling, but each manager has his preferences as to details. To blow in successfully the furnace should start off on fairly grey iron and a cinder sufficiently basic to prevent the new fire brick walls from being attached by any acidity, and thus disintegrated. Too sharp iron indicates a cold furnace, apt to chill or scaffold, and too acid cinder jeopardizes the masonry.

If the furnace is successfully "blown in" it gradually becomes hotter, gas sufficient for boilers and hot blast stoves is produced, and the proportion of the ore to the fuel charge is increased. These charges are based on a given quantity of fuel, the amount of ore used being regulated by its character, and the quality of the desired product; additional limestone being charged in sufficient quantities to flux away the impurities in the iron ore and fuel. Thus using a net ton or 2,000 pounds of fuel as a basis a manager would use say 3,750 pounds of ore, and 750 pounds of limestone, making the ratio of 1.875 to ore to one of fuel with twenty per cent. of limestone. These quantities however vary at different furnaces and according to the ores used.

The furnace stack is ordinarily situated in one end of a casting house, a long brick or iron building, the floor of which is made of sand. From the iron notch an iron runner connects with a sand trench extending to the opposite end of the building having such a grade that iron will flow properly. From this trough, auxilliary channels (sows), run off at right angles leading the molten metal to moulds where it assumes the shape known as "pig iron." As one sow and its pig moulds are filled, the place of entry from the trough or runner is cut off, and the next sow similarly treated, until the whole cast is made.



LOWER PORTION OF MODERN BLAST FURNACE.

Some furnace casting houses are equipped with iron moulds, but in a majority of cases the sand pig bed is used, and the moulds are made before each cast of metal. These casts are generally at regular intervals of from four to eight hours.

In many of the foreign blast furnaces the casting is done in the open air.

The work done in the casting house consists of keeping the tuyeres clean, making up pig beds, iron and cinder runners, etc., drawing, examining and removing cinder, handling and grading pig iron as detailed on succeeding pages.

## *Cinder and Its Uses.*

As the ores in the furnace are reduced the metal drops into the hearth along with the cinder, the latter being of less specific gravity floats on the metal, and is drawn off through the cinder notch as it accumulates. When molten iron has nearly filled the lower part of the crucible, cinder is again drawn off, and the iron tapped, the remaining cinder following the iron at each cast. This cinder is, by means of runners conveyed to specially prepared cars lined with fire brick or cast iron in which it is transported by steam or other power to the cinder dump. In some moderate sized furnaces it is run out of the building, allowed to cool in pits or in runners, being taken away in wagons or cars to the cinder pile. This waste material is often used, and made into mineral wool, paving blocks, ballast, etc. For the production of road metalling or ballast the molten cinder is run onto sloping ground so as to flow in sheets, which when broken up produces angular pieces of nearly uniform size. Or the molten cinder meeting a jet of water is granulated and a sand produced. Some blast furnaces have all of their cinder prepared as cubes for ballast, and taken away by the railroad companies at considerable saving to the iron company.

In the manufacture of paving blocks this sand is incorporated with cementing material, or the molten cinder is run into molds, and as soon as the forms are cool enough to handle they are taken to annealing furnaces where they are re-heated and then allowed to cool slowly. Mineral wool is quite liberally employed as a non-conductor of heat and sound, as filling between floors of passenger cars, as packing between the walls and casings of fire brick stoves, etc. It is produced by blowing a jet of steam through a stream of molten cinder, the cinder being drawn out into thin glassy threads, which accumulate in, and are collected from proper receptacles.

But the amount of cinder thus utilized is but small as compared with the total made, and liberal space must be provided for a cinder

dump, which at some plants assumes immense proportions, both in area and in height. The disposition of cinder therefore is at many blast furnaces a heavy item of expense. At Allentown the Lehigh river was spanned by a special bridge to reach a cinder dump, at Reading and at Glendon the cinder is elevated by steam power, and carried over railroad tracks, and at numerous furnaces a long haul is necessary to reach the place of deposit which covers many acres.

With the growth in size and output of blast furnaces, the quantity of cinder was augmented, and as locomotives were employed around blast furnaces, the improved cinder cars now in use, became a necessity, and the locomotive took the place of horses and mules. It may be stated in passing however, that the quantity of cinder now resulting and the space required for its storage is not in proportion to the amounts of iron made during the charcoal era, or the era of development, for as a rule richer ores are used, and smaller quantities of fuel and flux are required for the production of a ton of pig metal, consequently the amount of cinder for a given output is less than formerly. The practice which is nearly universal of carrying cinder off in a liquid state demands less room for the cinder dump than when the cold cinder in irregular lumps or bodies was deposited in heaps.

### *Casting Pig Iron.*

In some furnace plants, especially those connected with large steel plants, the iron, except on Sundays or in case of accident to the steel converting works, is run into ladle cars of a design similar, but somewhat stronger than the cinder car shown (see page 69), and discharged while molten into the converters, or into mixers, from whence it goes to the convertors to be made into steel.

The use of ladle cars is practicable where the iron from the blast furnace can be taken directly to where it is to be converted into other forms, particularly if it is there submitted to a treatment which alters its composition. Attempts to use molten iron direct from the blast furnace for the production of castings of various descriptions have been made, but unless several stacks can be drawn upon for the supply, or the foundry will consume the product of a blast furnace and be subject to its changes of grade, etc., this method does not offer immediate encouragement. On the other hand a large steel works which requires the output of a number of blast furnaces, effects a material saving by using liquid metal carried as before indicated in ladle cars, and to secure uniform product the ladles coming from various furnaces discharge their contents into mixers, from whence the molten metal is withdrawn into other similar ladle cars, which carry the iron to the steel converters. These mixers are large

TILTING CINDER CAR.

vessels lined with fire brick, capable of holding eighty to one hundred tons of metal, which are supported on trunnions and oscillated by means of steam or hydraulic power.

The advances made in our large steel works demand economies in every department, and instead of running the metal from the blast furnaces into moulds in pig beds, allowing it to cool and then burning fuel to bring it again into a molten state, so as to feed it to converter or furnace, the iron is run from the blast furnace into ladles, as above described, carried on railway trucks and on these conveyed to the steel works for conversion into steel. Each year has shown an increase in the quantity of iron thus treated, and in the year 1890 fully 620,000 tons of molten iron was taken in this direct manner from blast furnaces to the steel converting plants.

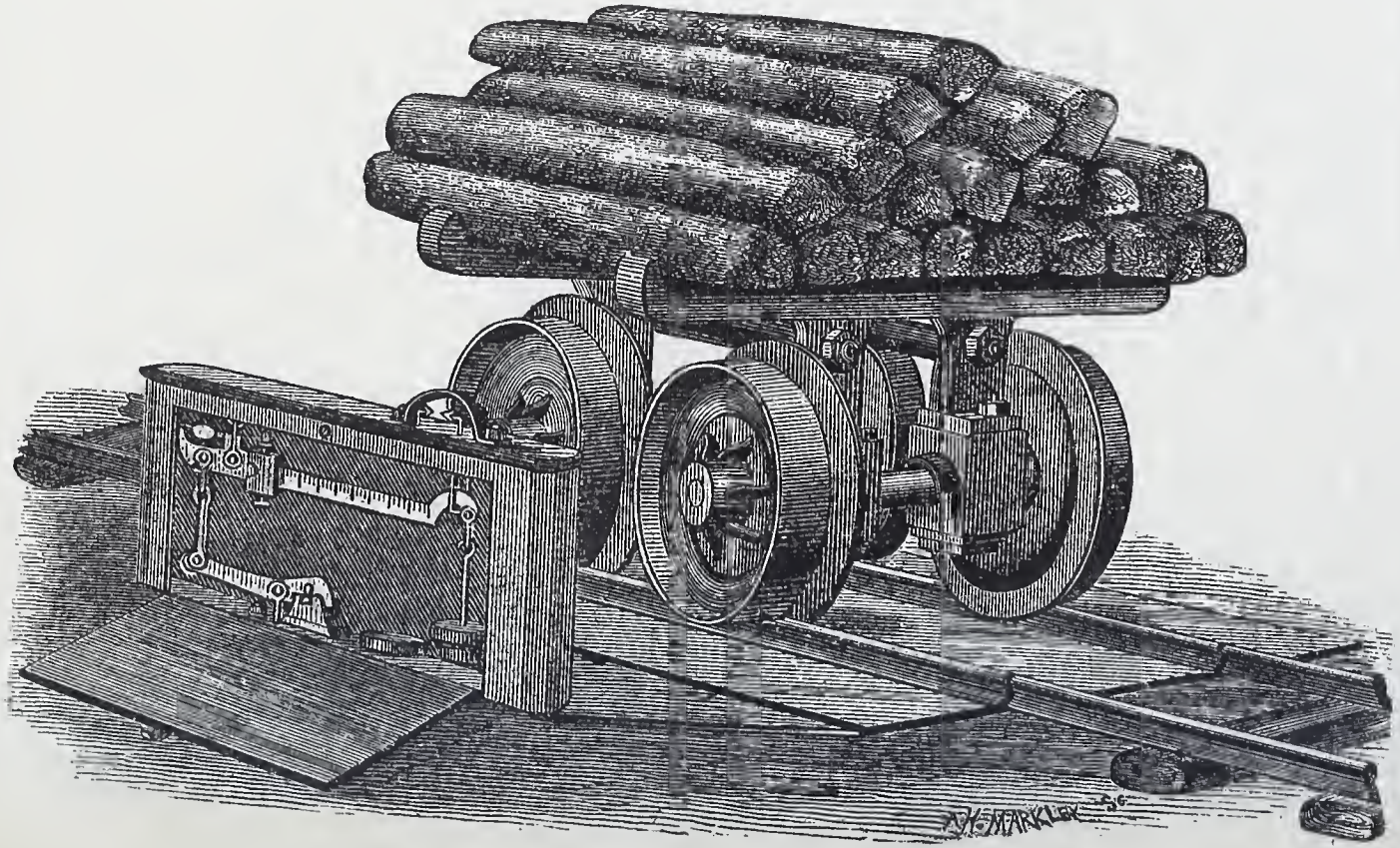
When iron is cast into sand moulds or into chills (iron moulds placed in the casting house floor) the pigs are broken loose from the sows, and are again broken, graded and piled. Beyond the application of the over head carriers or of cranes operated by the blast pressure or of portable tracks and trucks, the labor of handling pig iron from the pig bed has been reduced but little. But in some instances pig iron breakers operated by power are employed, and lately, in order to diminish the number of men employed, an apparatus has been designed by a Pennsylvania furnace manager which by means of overhead tramways and breakers, raises, breaks and conveys the pig metal from the cast house. One of the most approved methods is to have a railroad track on each side of the cast house the iron being carried by hand through the numerous side wall doors.

A view is given of the casting house of the Everett furnace (page 70) in Bedford county, where iron was being run into pigs, the molten metal is shown in the main runner, the sows and the pigs. The item of labor in casting houses demands attention for at some Pennsylvania blast furnaces it is excessive. Where iron is cast into pigs, and where two or more large blast furnaces form a plant a saving would probably result by carrying the molten metal in ladle cars to casting sheds, fitted with mechanical appliances for moulding the pig beds, breaking, handling, weighing and stocking or shipping the iron.

### *Selling Prices of Pig Iron Made With Mineral Fuel.*

The American Iron and Steel Association has brought the statistics in regard to the prices of No. 1 anthracite pig iron at Philadelphia, from the close of Mr. Neilson's figures in 1866 down to 1894; this shows that the highest yearly average in this period was $48.87½ per ton in 1872, the maximum monthly average price being $53.87½ in September of the same year. The minimum annual average was,

# PIG METAL SCALE AND TRUCK.



The purchasers of pig iron are becoming more exacting in their requirements as knowledge of the chemistry of iron is extended, and consequently the physical characteristics are not alone depended upon, the chemical composition being also taken into account. Hence while pig iron may be sold as No. 1 X or a No. 2 B, its chemical composition must also be known. Therefore a published quotation for certain grades of iron from one furnace may be above or below that of the same grade of another furnace, if the percentage of carbon, phosphorus, manganese, silicon, etc., are different, and the open market rates are more of a guide than a statement of the prices received for various makes of iron. As a rule the market rates are slightly in advance of the actual average selling prices.

The personal factor also enters into the question of grading, the materials from which the metal is made, and the condition of the furnace likewise exerting an influence.

As a rule No. 1 or in some cases No. 1X is the best grade produced at a furnace, that is the iron showing the largest crystals, and darkest face on fracture, but a No. 1 iron from one furnace may be quite different in appearance from the same grade made at another plant, or two irons from the same furnace, whose fracture would cause them to be graded alike may, by the difference of one per cent. of silicon, 0.01 per cent. of phosphorus, or 0.5 per cent. of sulphur, produce radically different results in the foundry or rolling mill.

### *Composition of Pig Iron.*

Concerning the influence of carbon, Sir William Fairbairn a noted English metallurgist some years ago wrote:

"The metal in the form of cast iron, containing four per cent. of carbon, has a tensile strength of 18,000 pounds to the square inch, and is worth £3 per ton. Deprive it of this four per cent. of carbon and it becomes malleable iron, with a tensile strength of 56,000 pounds, and is raised in value to £8 per ton. But leave in it one per cent. of the carbon it originally contained, and it will have a tensile strength of at least 130,000 pounds, and its selling price rises to £50 per ton." This price, of course, refers to crucible steel at the time he wrote.

The chemical laboratory is an essential for a modern blast furnace plant, and in this both rapid and exact methods must be followed. Prompt results are also demanded to meet the requirements of trade, for although the proportions of some of the elements are controlled by the ore smelted, others are influenced by the operation of the furnace; hence results must follow quickly the production of pig metal. The refinement to which chemical analysis is carried in connection with the production of pig iron is not excelled in other metallurgical operations, even in the assaying of the precious metals,

where such small fractions of one per cent. of an element are not sought for as in determining the phosphorus in iron. A discussion of the influence of the various elements would occupy pages, but the following from the pen of Mr. A. E. Outerbridge, Jr., (vide Franklin Institute Journal, Vol. CXXV, page 223) may illustrate some peculiarities of fracture.

"Pig iron varies so greatly in general appearance, color, hardness, ductility, tensile and transverse strength and specific gravity, that one not having expert knowledge upon the subject, might reasonably doubt that the specimens exhibited on the accompanying plate, even belong to the same class of metal. One specimen is soft and ductile like lead, and shows a rich, dark color and coarse granular fracture; another is hard as steel, brittle as glass, and white as silver, while between these extremes we have a great range of specimens having intermediate qualities.

A photograph was taken from a series of "test pieces," (of which Figs. 1 and 2, page 74, are reproductions) made from different grades of pig iron, in moulds of uniform size, cast in "green sand," against an iron "chill plate" for the purpose of suddenly cooling one side of the casting. The pieces are arranged in a series with the chilled side uppermost, beginning with a sample which shows no tendency to produce white or chilled metal, and passing by gradual steps, to metal which crystallizes as white iron through the whole mass. All of these specimens were cast from iron which was perfectly gray in the pig, sufficiently soft to bore readily, varying but slightly in specific gravity, and ranging in transverse strength from 5,000 to 7,000 pounds per square inch. The effect of sudden cooling has developed the white crystalline structure in some of the specimens, rendering them so hard that they cannot be touched with a file, and so brittle that they may be readily broken, and increasing their density to such a degree that a cubic foot of the white metal weighs nearly sixty pounds more than an equal bulk of the gray iron.

The requirements of the steel producing works of the country would carry this discussion to unnecessary limits, and an examination of what rolling mill managers desire would similarly enlarge the scope of this paper beyond what was intended. However to emphasize some of the influences which are exerted upon pig iron for foundry use the following is excerpted from a paper on "The Relative Tests of Cast Iron" * by W. J. Keep of Detroit.

"Cast iron is a very complex material, composed of a little more than ninety per cent. of pure iron, combined both chemically and mechanically with various metalloids, the principal of which are carbon, silicon, phosphorus, sulphur and manganese. The material could not be melted and cast into moulds if it were not for the pres-

CASTING HOUSE, EVERETT FURNACE.

ence of the first two, and it seems almost impossible to prove that the rest are injurious. We mean that, in such small quantities as they are generally found in merchantable pig iron, they do no harm, and perhaps, for foundry uses, are a positive benefit. Carbon and silicon are certainly not impurities.

In melting cast iron the heat of the cupola, the intensity of the blast, and the manner in which the melted metal is handled, have a decided effect on the physical character of the casting. Different castings poured from one ladle of iron will vary in quality, and such variation cannot be explained by chemical analysis, as the chemical composition seems to be the same in both. The difference seems to lie in a different crystalline structure.

Manganese need not be feared when it is below one per cent. in the casting. Ordinary foundry irons do not bring into a foundry mixture more than this quantity. When above one per cent. it may increase shrinkage and hardness.

Phosphorus in the quantity usually found in cast iron exerts no influence on the physical quality, but it slightly reduces shrinkage. It adds some life to the iron. It weakens the iron when it contains over one per cent.

There is not the slightest indication that sulphur is in any way beneficial. Sulphur will get into a casting from the fuel, and chemists are accustomed to lay any unexplainable peculiarity to sulphur.

Carbon is the most important element in cast iron. Without it, iron could not be melted readily and made into castings. The percentage of total carbon determines the melting point of the iron. Carbon in melted iron is probably always combined (or dissolved), and more can be retained by the iron when fluid than when cold. On cooling, any surplus separates out into graphite and makes a gray casting. Total carbon no, doubt, exerts an influence on strength.

Combined carbon directly influences shrinkage.

Graphitic carbon, by dividing the grains of metal, softens cast iron; it also removes brittleness, and by the mechanical separation of the the grain may cause weakness. All carbon in fluid iron is supposed to be combined with or dissolved in the iron, and fluid iron is capable of holding more carbon in combination than it could hold when cold. For this reason pig iron that is saturated with carbon, that is, contains all that it can dissolve and hold when it is melted, will be gray when it solidifies, on account of the particles of black carbon being caught between its crystals.

Silicon is of little use in cast iron, except as it acts on carbon. The greater the quantity of combined carbon present, the greater will be the influence of silicon."

Fig. 3 is a photograph taken from a series of chilled iron test

pieces, which were cast in iron ingot moulds from gray iron, some of which showed no tendency to produce white iron when cast in the ordinary "chill molds," yet in these small ingot molds they are chilled throughout the mass, showing differences in the molecular arrangement and size of the crystals, and what is still more singular, in all of the square sections a plainly marked cross, or dividing lines, extending from corner to corner of the ingot. White iron always crystallizes in planes at right angles to the chilling surface, and as the moulds are made of iron, the crystals start from all four sides at the same instant, and meet at points equi-distant from the surface, which may be called the neutral line. In the specimens cast in the cylindrical moulds, the crystals radiate from the center like the spokes of a cart wheel. Some of the specimens shown are so brittle that the slighest tap from a light hammer will break them, while others of the same diameter require more than 100 blows to break. Some of them are much harder than others, while the difference in density amounts to nearly ten pounds to the cubic foot.

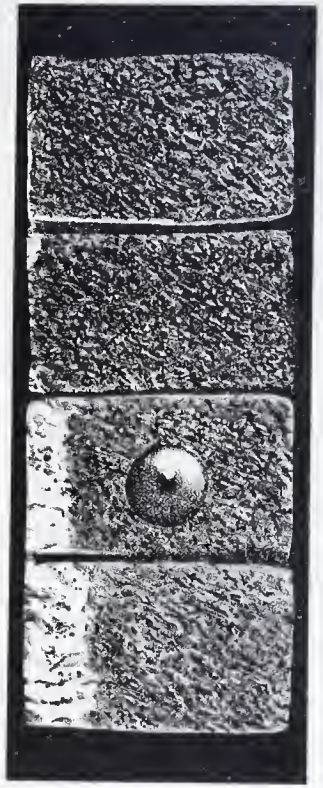
Fig. 4 is a section through the rim of an ordinary chilled iron car wheel, showing the grey iron body and chilled tread. The ideal iron for car wheels is a metal having an extremely dark, open grained or coarse fracture in the body or plate of the wheel and a pure white, fine-grained adamantine structure on the tread extending to a depth of about half an inch beneath the surface and merging gradually into the soft gray iron backing.

Manufacturers are beginning to realize that pig iron is not a simple substance but is in reality an alloy, composed of a number of dissimilar elements; that its physical characteristics, such as strength, elasticity, etc., depend upon the percentages of these constituents and that pure iron, like pure gold, is always the same thing physically and chemically, no matter from what source it may be obtained.

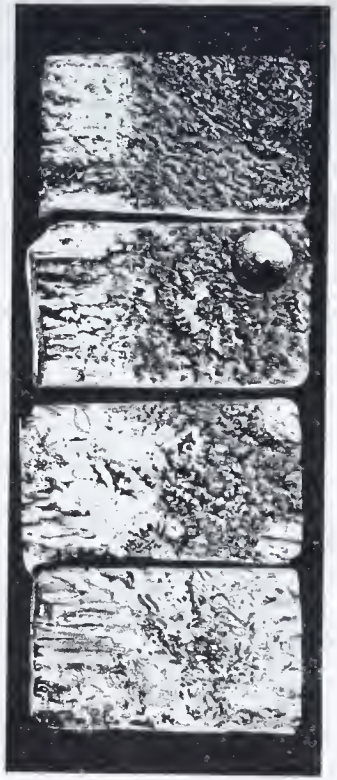
### *Blast Furnace Gases.*

In addition to pig iron and cinder a blast furnace produces a large volume of gas, whose thermal value depends upon the condition of the furnace and the quantity of fuel consumed per ton of iron.

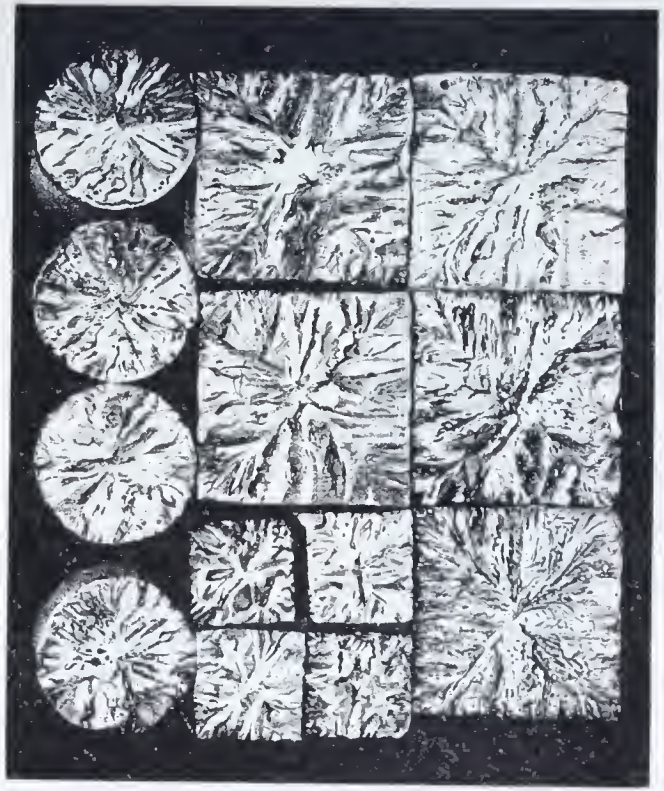
The gases formed in the blast furnace by the combustion of the fuel, and which are prevented from escaping by means of the bell and hopper, pass out through suitable flues to one or two large sheet iron pipes, "down-takes," lined with fire brick, having near the ground level enlarged sections or "dust catchers," in which the heavier particles carried over are deposited; these are cleaned at regular intervals. From the dust catchers the gases are conveyed by other tubes or pipes, similarly lined, to the boilers and hot blast stoves where they serve as fuel. The desirability of having clean gas



1



2

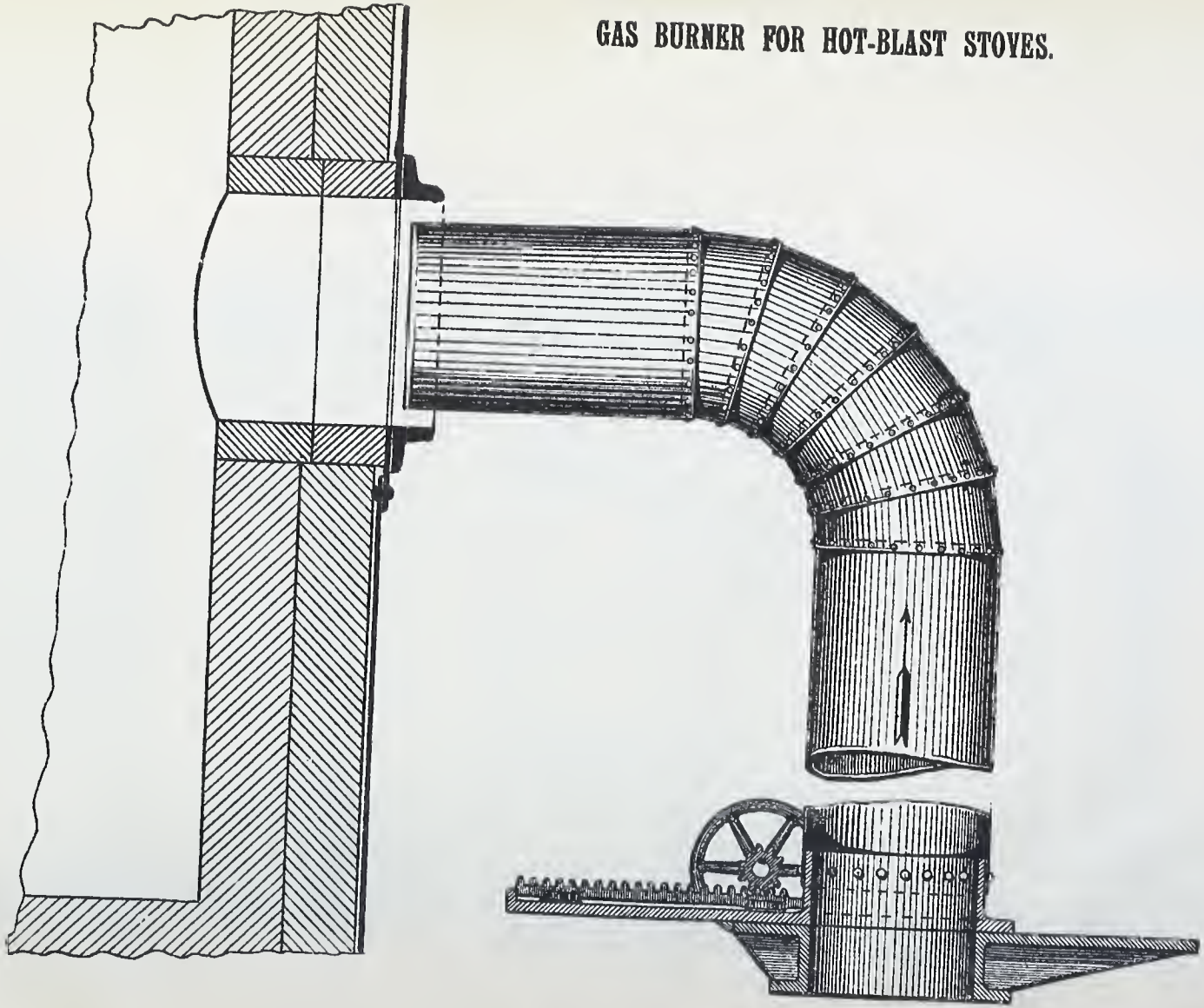


3

4

FRACTURE OF IRON.

# GAS BURNER FOR HOT-BLAST STOVES.



has encouraged the use of water sprays in connection with dust catchers so as to remove the floculent material which does not deposit by simply retarding the current. Washed gas is an improvement and decreases the deposit under boilers and in the passages of the hot blast stoves but the wet dust is apt to clog flues near to the washer.

A furnace which is running normally generally furnishes sufficient gas for the boilers and hot blast stoves, and sometimes a surplus if the fuel consumption is high. But some plants producing Bessemer pig iron which have reduced the fuel consumption close to what is now considered the practical limit, find supplemental firing of boilers necessary for a considerable portion of time.

The best results are obtained by admitting the furnace gases to a combustion chamber before they pass into the boiler or hot blast chambers and a small bed of coal is often kept in these chambers to ignite the gases as they enter. To utilize the gas to advantage various forms of burners are employed, simple pipes with damper, pipes in which the gas entering surrounds one or more smaller pipes, supplying air to support combustion, flat nozzles for either gas or air, or both, with nicely adjusted valves for regulating the proportionate quantities, as shown in front of boilers.

One of the most popular forms withdraws the gas conduit from the opening leading to the combustion chamber as the valve controlling the supply is closed; and projects it into the chamber as the valve opens—one advantage of this is that any gas which leaks through the valves does not enter the combustion chamber.

In all applications of blast furnace gases the efficiency obtained is influenced by the amount of flue dust (fine ash or ore) which is carried over with the gases, for unless this is well removed by restricting the current in dust catchers, or by spraying the gases or passing them through water, a deposit is formed on the walls of passages and flues, which not only restricts the area but also reduces the power of the fire-brick masonry to absorb heat.

It was about 1876 that the idea of sealing the furnace so that when the bell was lowered the gas would not escape into the air, but would continue to flow to the boilers and hot blast ovens, was applied to several furnaces; the original form being a conical top placed over the hopper in which were a series of openings closed by hinged doors, the doors also sliding by means of suitable mechanism on rails and trolleys; when it was desired to charge the hopper the doors were moved to one side and returned after the hopper was ready to be discharged by lowering the bell, the object of the hinged doors being to enable them to open in case of explosion. Later forms are discs, which are carried on the arms of the levers (as in the illustration of the Warwick furnace, Fig. V, page 50), or moving on rails, cover the tunnel head opening when the bell is lowered.

*Use of Regenerative Hot Blast Stoves.*

The fire brick or regenerative hot blast stoves which at present are the most generally used and have largely superseded the older forms of iron pipe stoves herein described, are circular structures from fifteen to twenty-four feet in diameter, and from forty to eighty feet high, built of fire brick with a tightly jointed sheet iron or steel casing. The gases enter the combustion chamber through suitable burners, are there ignited, the flame passing through narrow passages or checkerwork of masonry, heating it to a high temperature. When these are sufficiently heated the gas is shut off and cold air is forced by the blowing machinery through the hot passages of the masonry and checkerwork, and by absorbing heat is raised to temperatures of from 1,000 degrees to 1,500 degrees F. There are usually three stoves to a furnace stack, two of which are being heated by gas burning in them, while the third is raising the temperature of the air which is passing through it on its way to the tuyeres. From the hot blast stoves the air is conveyed by wrought iron pipes lined with fire brick to the "bustle pipe," similarly protected, which encircles the bosh of the furnace below the mantel ring; to this the tuyere stocks are attached which lead to the furnace crucible, where the air furnishes the oxygen necessary for the combustion of the fuel. Where several stacks are grouped in a plant, reserve blast heating capacity is secured by having seven stoves to two stacks; in some instances but two stoves per furnace are used, but it is questionable economy.

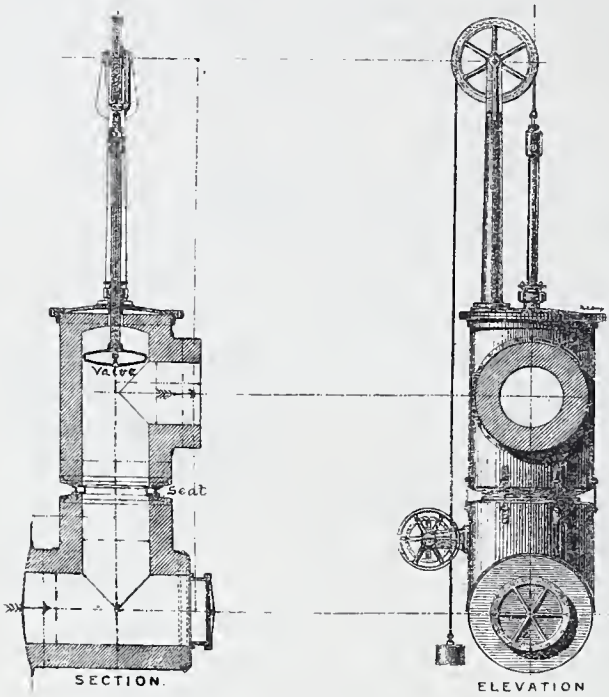
In the iron pipe stove already described the gas burned constantly in the combustion chamber, heating the air as it passed through the pipes, but not to so high a degree as in the fire-brick stoves.

The high temperature maintained in present furnace practice make it necessary that the valves about the fire-brick stoves be air cushioned or water cooled, in order to preserve their integrity, and the tuyeres, cinder and iron notches are similarly cooled by water.

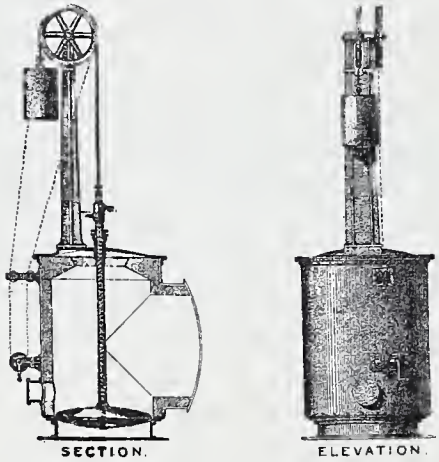
The elevation of the temperature of the air supplied to a blast furnace permits of a material decrease in the fuel consumption per ton of iron made, and an increase in the quantity of iron produced in a given time, but to secure these advantages it is essential that the temperature should be maintained with practical uniformity. It is for this reason that three or four stoves per furnace stack are desirable. Hot blast stoves are seldom operated at their maximum for a reserve is desirable to assist the furnace over any irregularity, and, in fact, this possibility is a strong argument in favor of fire brick stoves.

To maintain a uniform temperature pyrometers are used; these are either strips of different metals which, by differential expansion

# HOT-BLAST VALVE.




## CHIMNEY VALVE.



and contraction, indicate on a dial the temperature of blast passing through the apparatus, or they are copper balls which, when heated by the blast, elevate a given volume of water a certain number of degrees corresponding to a proportionate air temperature. A late form of pneumatic pyrometer now being introduced maintains a continuous automatic record of temperature which can be indicated at a distance from the furnace.

The careful maintenance of records of blast volume, temperature (and in some cases of pressure), grade and quantity of iron produced, character of cinder made and other minor matters are essential, as well as a statement of the quantities of various ores, fuels and fluxes used, the time lost, etc. These records, if conscientiously maintained, can be utilized by an expert in diagnosing the state of a blast furnace at a given time, and explain to him certain irregularities of operation or product. One manager of a Pennsylvania blast furnace, and possibly others, add to the ordinary record the temperature and moisture of the air, and the hygrometer will undoubtedly be a factor in the future blast furnace equipment.

The aqueous vapor in the air driven into blast furnaces must be decomposed and in warm weather a material decline in the economical operation of the furnace is noted, in fact, there is generally a difference during warm weather between the working of the furnaces during the day and night in favor of the latter, which is attributable to the difference in the amount of aqueous vapor carried into the furnace.

While the foregoing data concerning the general form of fire-brick hot blast stoves applies to those now in use, there is a great diversity in proportions, in form and in arrangement of checkerwork and combustion chambers, and also in the valves, etc., used. Originally these stoves were but 30 or 40 feet high and the gases were forced to traverse up and down a number of walls enroute to the chimney, the air, after the walls had been heated sufficiently, following an opposite direction in as many as twelve passes.

Subsequent improvements increased the height of stoves and reduced the number of passes, and now they are constructed from a single gas pass to four passes, and from two to four passes for the air. The necessity of having a free flow of gas through numerous passes demanded strong draught and one of the prominent features of a blast furnace plant is a high chimney, generally an iron shell lined with fire brick, to which all of the stoves and sometimes the boilers are connected. Some of these chimnies exceed 200 feet in height. With stoves having single and three passes for the gases, individual chimnies are placed on top of the stoves, and in some of the two and four pass stoves, chimnies for each stove are placed at ground level. The gas being admitted near the bottom of the stoves

an uneven number of passes for the gas brings it to the top, while an even number brings the chimney connection at the bottom.

Illustrations of four of the prominent forms of regenerative fire-brick stoves are given (page 80). "A" represents the Cowper type of stove, the gas entering a combustion chamber of lozenge section, through the valve marked 6, the products of combustion pass up through the chamber marked 1, down through the checkerwork marked 2 and leave the stove through the chimney valve marked 7. After the mass of brick work is heated sufficiently, cold air enters through the valve 8, traverses the checkerwork in an upward direction and passes down through the combustion chamber which it leaves by the hot blast valve 5.

"B" is the Hugh Kennedy stove, the gas entering in through six burners into a combustion chamber below the checkerwork, passes up through this checkerwork, and out through a chimney valve 7 on top. The cold air enters through the valve, traverses the lozenge section chamber to the top, then through the checkerwork and out through the hot blast valve 5.

The Whitwell type "C" has four passes, two up and two down, the air following a direction directly contrary to that which has been traversed by the gas.

The Gordon Whitwell Cowper type "D" has three passes, the gas burning in a combustion chamber passes upward, is then first drawn down and then up, passing out through the chimney, while the cold air entering at the top of the checkerwork follows down through it, up through the middle pass and down through the combustion chamber to the hot blast connection.

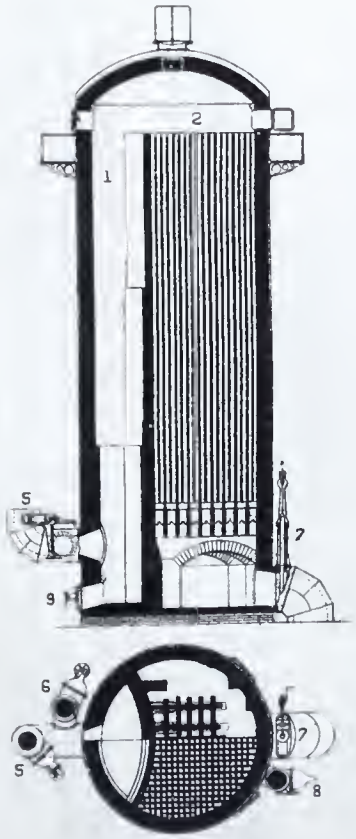
In each of the four types of stove the hot blast connection is indicated by the number 5, the gas inlet or burners by 6, the chimney valve by 7, the connection for cold air by 8 and the air vents by 9. In all cases the structure is an iron or steel shell surrounding fire-brick masonry of the design shown with packing between the shell and the brick work.

### *Boiler Equipment.*

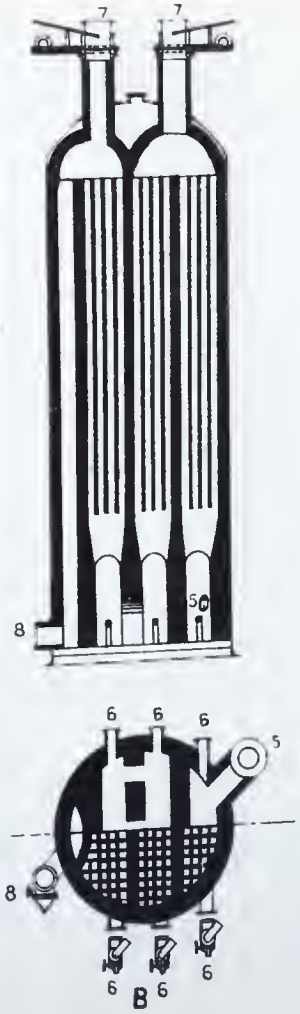
While the type of boilers employed in the era of development are in use generally, a number of water tube boilers have in late years been added to Pennsylvania blast furnace equipments with satisfactory results, the space occupied, and the quick steaming qualities making them desirable as auxiliary to the forms in use.

Essential features of a blast furnace boiler plant are ample water and steam space, for the fuel to generate steam being a result of the blast furnace operation is dependent upon the working of the furnace, hence any stoppage of blast, caused a suspension of the flow

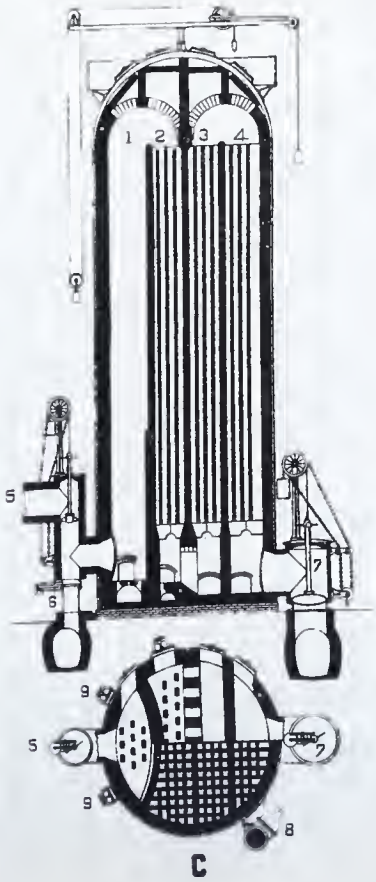
# FIRE BRICK HOT BLAST STOVES



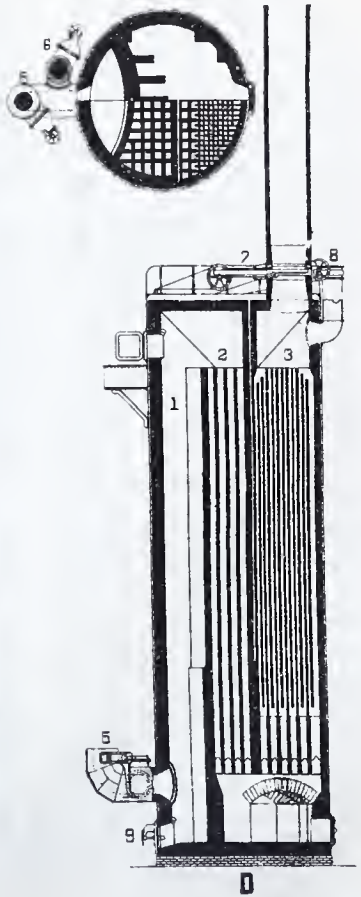

Cowper.




HUGH KENNEDY




Whitwell.




Gordon's Whitwell Cowper

of gas. While the boilers depend upon blast furnace gases for fuel, they are also supplied with grates and doors for firing with coal, so as to overcome the disadvantages of a temporary short gas supply, and at a number of furnaces coal is constantly fed under the boilers.

In the western part of the State natural gas has been used most advantageously in place of coal, and some plants elsewhere are equipped to use oil as a supplementary fuel, suitable burners being attached for this purpose.

In addition to the structures mentioned, a blast furnace plant embraces buildings to accommodate the necessary machinery for electric lighting, pumping, office and laboratory work, etc.

*Blowing Machinery.*

Mention has already been made of the earlier forms of bellows, wooden blowing tubs and small iron blast cylinders, and it is not necessary to trace the development of the improved mechanisms now constructed through the various intermediate stages. However, it is interesting to note that ever since the bellows gave way to the wooden cylinder or blowing tub there have been in use in Pennnsylvania vertical and horizontal blowing machinery, and although the former are much more numerous and are generally accepted as superior, there are numerous champions of the latter and a number of late designs are now in operation in the State.

The great majority of blowing engines are of the vertical high pressure "bull" type with blast cylinder supported by housings or columns above the steam cylinder, the piston rod which is common to both cylinders being provided with a cross head to which the connecting rods are attached which cause two outside fly wheels to revolve. The proportions of such an engine will be appreciated by the following dimensions of that in use at the Warwick furnace, the illustration of which was supplied by the Warner Machine Works Company of Lebanon: Diameter of steam cylinder, 54 inches; diameter of air cylinder, 108 inches; stroke of each, 72 inches; total height of engine above main foundation, 38 feet 3 inches; diameter of fly wheels, 20 feet; weight of each fly wheel, 60,000 pounds; total weight of engine, 157 tons. It can deliver 25,000 cubic feet of air per minute.

As a rule there is ample furnace gas to furnish fuel for heating the blast, and for generating steam to operate the machinery connected with a furnace plant, but where Bessemer iron is made, and where the fuel consumption per ton of product is reduced to the present apparent limit of economy, the quantity and quality of gas produced in the furnace is either insufficient or so close to the requirements, as to encourage the use of engines of higher efficiency than is obtainable from machinery operated under high pressure.

In a few instances condensors form a part of the engines, but in more cases independent condensors are connected with the machinery. Lately compound engines have been introduced with a view to greater steam economy, and such an arrangement is in use at one of the Edgar Thomson furnaces. This arrangement consists really of two independent engines, similar in design, but with steam cylinders of different diameters, the object being to operate the engine with the smaller cylinder under high pressure, and have it exhaust into the larger cylinder, thus making a compound engine. To the large cylinder a condensor is attached. These engines are arranged so as to be run independently or together. Their principal dimensions are :

| | *High pressure engine.* | *Low pressure engine.* |
|---|---|---|
| Diameter of steam cylinders, inches, . . . | 40 | 70 |
| Diameter of air cylinders, inches, . . . . . | 72 | 72 |
| Stroke of each cylinder, inches, . . . . . | 60 | 60 |

Total height of engines above main foundation, 32 feet.
Diameter of fly wheels, 18 feet.

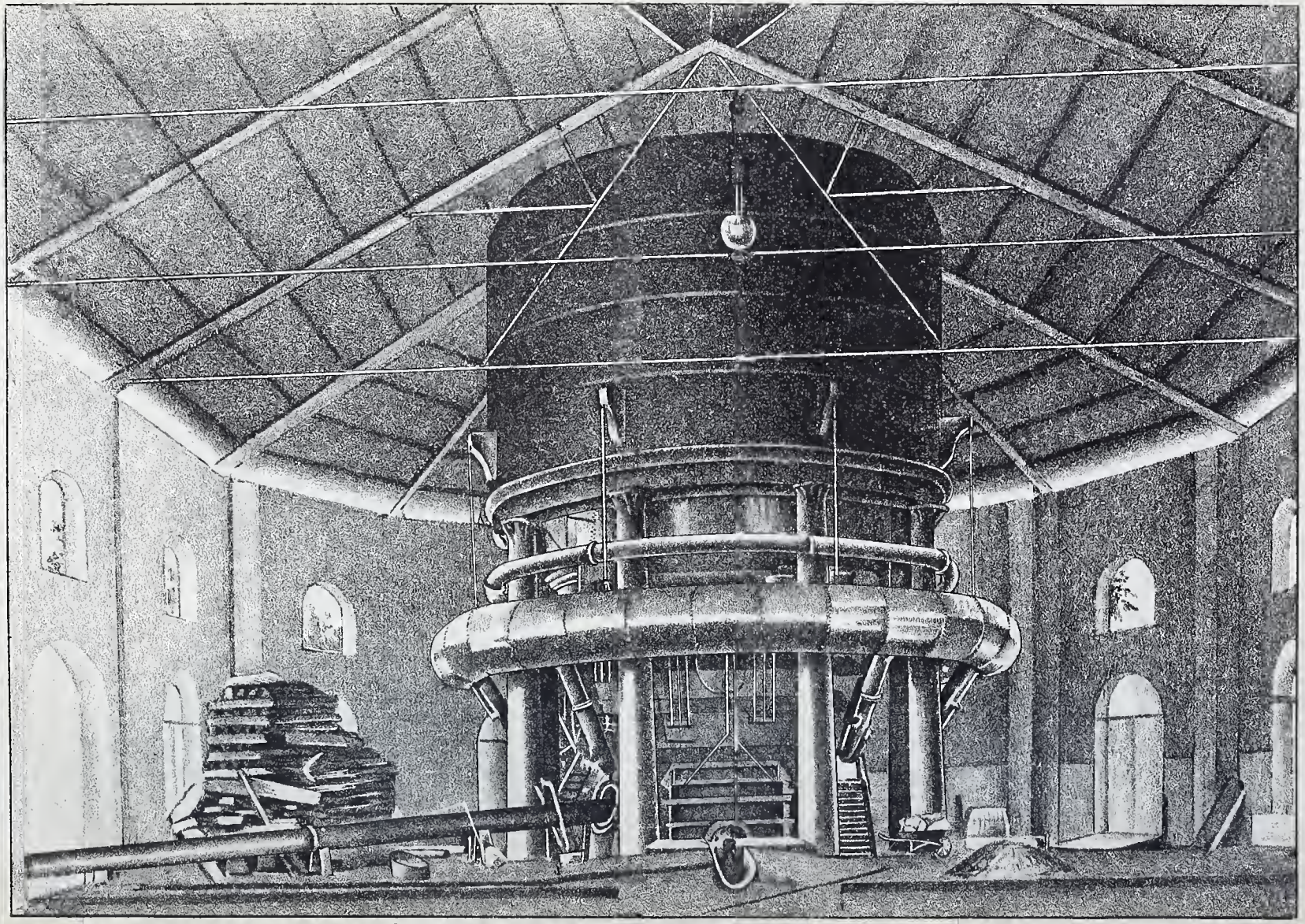
### *Blast Furnace Management.*

The manager or superintendent has charge of the blast furnace plant, his chief assistant being the "founder," whose duty is to see that the proportionate amount of ingredients agreed upon are fed to the furnaces at proper times, keeping them well filled, regulating the temperature, volume and pressure of the air as directed by the manager, maintaining a careful record, and giving a general oversight to the detailed working of the furnace.

Each furnace has its "keeper" and assistants who are stationed at its base, to watch and regulate the smelting in the crucible of the furnace, through peep holes in the tuyere stocks, tap the iron and cinder, keep the tuyeres free of cinder, make pig beds, and run the iron into molds. The keeper is also expected to examine the fracture, color and viscidity of the slag removed at each "flush," and have recorded the volume and pressure of air at the blowing engine, its temperature at stoves and furnace, reporting any irregularity in the "working" of the furnace, etc.

The "top fillers" receive the buggies of iron ore, fuel and limestone from the hoist cages at the tunnel head, see that they are properly distributed on the bell and fed to the furnace at appropriate times, keeping it well supplied.

The engineer and his assistants have charge of the blowing machinery, pumps, boilers, electric light plant, etc., running accord-



Casting House, Monongahela Furnaces.

ing to the manager's directions, and keeping hourly records. Trained men also look after the hot blast stoves, see that the air is turned on and off at proper intervals, that the requisite quantity of gas is being fed into, and that it is properly burned in them.

Gangs of men prepare the ore, flux and fuel in the stock house, place them in charging buggies and deliver these to the hoist cages. Others in the cast house break the pigs and sows, grade the iron and pile it ready for shipment or load it on cars.

The chemist makes and reports the analysis of the various ores, fuel and limestone used, enabling the manager to properly calculate his burden. He also analyzes the manufactured product, slag and furnace gases.

The manager having the general oversight of the plant, must order in advance ore, fuel, limestone, lubricants and general supplies, approve bills, audit pay rolls, attend to sales of pig iron, as well as find the time necessary for correspondence, etc.

He must be on the look out for, and promptly overcome when they are discovered irregularities in the working of the furnace. If the furnace is not properly "blown in" or if the fuel burns on one side of the stack, and not on the other, or should the materials "slip," that is, descend more rapidly on one side of the furnace than another, or if the stock should accumulate on bosh or inwall so that it does not flow properly and becomes cintered, the furnace is said to be "scaffolded," and every endeavor is made to dislodge the accumulation, by means of blank charges of fuel, or fuel and flux. Dynamite is also often exploded in hopes of breaking down the scaffold, or openings are made near where the scaffold is supposed to exist, and "monkey" tuyeres inserted with oil jets in the hope of melting it off. Often, especially near the end of a campaign the iron and cinder break out through the furnace walls so that the crucible must be repaired, and instances are on record where practically a new crucible had been constructed while the furnace was in blast. When a cooling plate or tuyere is burnt out, it must be replaced by another, but this is now quickly done. In "blowing out" the furnace, care must also be taken that none of the molten iron be left in the furnace to cool, and form a "salamander" which can only be removed at considerable expense, and that while blowing out, the bell and top fixtures are kept sprayed with water to prevent their destruction. Some times a bell may fall into a furnace, and in case it cannot be recovered, a temporary make shift must be provided. There may be explosions caused by leakage of gas, a stoppage of the engine due to accident to machinery or boilers may allow the tuyeres to fill with cinder, necessitating their removal and cleaning. The iron notch may fill with chilled iron and have to be opened by a power drill or by a blow pipe. In casting, the molten iron may come in contact with water, causing explosions,

destroying the pig beds, and making a large amount of unmarketable scrap which must be recharged into the furnace. In cases of accident or where, owing to a strike, proper quantities of fuel or ore cannot be obtained, and where it is believed that such stoppage will be but temporary, the furnace is "banked," the iron and cinder being drawn off, the interior is filled with fuel, all ingress of air being prevented by luting with clay. Furnaces have often stood this way for months and sometimes for more than a year, but unless the stoppage is but temporary, the economy is questionable. At times portions of the crucible inwall or bosh have been destroyed and repaired without going out of blast.

## PROGRESS AS ILLUSTRATED BY BLAST FURNACE OPERATION.

To illustrate the progress made and to present an idea of the work required at a blast furnace, statements of details from various plants in Pennsylvania could be instanced, but it is considered more satisfactory to choose for illustration indicative plants in the charcoal, anthracite and coke groups.

Pine Grove charcoal furnace is selected to represent the charcoal group. While the Cornwall charcoal furnace has been recognized as the oldest furnace structure in Pennsylvania, it has been idle so long, and the chances of its revival are so slight, that it can hardly be considered as active. This is not true of the Pine Grove furnace in the Mountain Creek Valley, Cumberland county, which has been in nearly continuous operation since 1771, and which is in blast as this paper is being written. The furnace now uses practically the same kind of fuel, and the same character of ore, as were supplied to it when started.

For over 100 years this plant was operated by water power, which furnished cold blast to the crucible and produced about 20 tons of iron per week with a fuel consumption of 160 bushels of charcoal. About 1870 a hot blast stove was added and the product was increased to about 50 tons per week with a consumption of 120 to 140 bushels of charcoal per ton of iron made. The record of this furnace for 1872, shows that the weekly output averaged 50 tons of pig iron, the maximum being 62 tons. There were required from 4,750 to 5,525 pounds of brown hematite ore,* from 665 to 1,060 pounds of limestone, and from 106 to 131 bushels of charcoal to produce a ton of pig iron, the averages being, ore 5,300 pounds, limestone 964 pounds, charcoal 122 bushels. With charcoal charged at 7 cents per bushel, ore $3.00 per ton and limestone $1.00 per ton, the net cost of iron manufacture ranged from $16.80 to $19.36 per ton. Labor at furnace entering

*Yielding from forty to forty-eight per cent. of iron.

into this at from $1.16 to $1.80 per ton, but in addition the charge for roasting and preparing ore at furnace ranged from 54 cents to $1.25 per ton of iron made making the total labor costs, $1.60 to $3.05 per ton of metal produced.

Until 1877 the blast was supplied by two vertical single acting wooden blowing tubs which discharged into a third, in which was a weighted piston, a water wheel being the motive force.

The furnace which had been from 30 to 40 feet in height was raised to 53 feet in 1877, by placing an iron shell lined with fire brick on top of the old stone stack, but the bosh diameter could not be increased on account of the old masonry and as now operated the furnace has a bosh diameter of 9 feet. The remodelled furnace was fitted with a bell and hopper, and the gases carried to the hot blast stove, and to a battery of boilers which supplied steam to a Weimer blowing engine, which had been built for the Centennial Exposition of 1876. A vertical hoist raised the ore from the ground level, and charcoal from the old bank level, thus modernizing the plant. These changes enlarged the output of the furnace to 100 tons per week, and reduced the fuel consumption to from 100 to 115 bushels per ton, and its present output is given as 5,400 tons per annum.

All of the materials entering into the production of pig iron have been obtained from the lands owned in connection with the furnace. The charcoal is produced from timber cut on the South mountain ranges, which surround the plant. Brown hematite ores are dug and washed from mines close to the plant and in the valley of Mountian creek, and limestone is obtained adjacent to the ore or from the Cumberland valley.

The methods followed in cutting wood, making and transporting the charcoal, with but few modifications, are the same which were followed when the Pine Grove furnace was started. These modifications reduce the waste and economize wood and labor, but most of the charcoal made by the company operating the furnace is produced in meilers, where the wood is cut, and hauled by wagon to the furnace. Charcoal when purchased from others is brought in by railroad to the furnace.

The comparative economies of the present and older practice are therefore less pronounced at Pine Grove than at some other furnaces, and yet the increased output of the furnace, reduced fuel consumption, improvements in ore mining, employment of railroad to bring ore to and take pig iron from the furnace, and the minor economies in charcoal manufacture, have made it possible for this plant to make and market its product at less than one-half what the metal made from the old plant from similar ores and fuel commanded.

The Pine Grove furnace attracted considerable attention by experiments made in 1878 with various fuels. Briefly these may be summarized as follows:

"After the supply of charcoal on hand was exhausted, the campaign was continued with coke, then by reason of a short supply of coke, due to a strike, coke and anthracite were mixed; then all anthracite was charged, followed by other mixtures of coke and anthracite, all coke, and finally again charcoal. Careful records kept during these experiments permitted of drawing the conclusions forming the basis of some of the statements presented in this paper. These records showed that larger outputs and lower fuel consumption per ton of product were obtained when using charcoal, than when coke was charged, and that, as anthracite coal replaced coke, the output fell off, and the fuel consumption increased. The pressure of air necessary to operate the furnace was also augmented as a larger portion of anthracite was used, and the greater amount of ash and sulphur in the mineral fuel demanded more limestone as flux than was required when charcoal was employed."*

*The Warwick Anthracite Furnace.*

The Warwick furnace having achieved renown, it was natural that this name should be perpetuated in another stack, erected to use mineral fuel at Pottstown in 1875-6 and a record of the operation and equipment of the new Warwick furnace will be given as indicating some of the vicissitudes of blast furnace operation, illustrating details of construction and equipment, and showing changes which have been introduced from time to time in anthracite practice.

It will be noted as the record is perused, that the Warwick furnace has not depended entirely upon anthracite coal, but coke has been used as a mixture with anthracite since 1881. This plant however, has continued to use anthracite as the basis of its fuel supply, and is now probably the best instance, all things considered, which can be mentioned for the purpose named.

This furnace is also selected because much of its work being recorded in technical literature, can be referred to, because the changes in structure which illustrate advances were improving the equipment of the original plant, part of which still remains, and because the operations show how rapidly a knowledge of the chemistry of iron smelting has permitted augmented output.

The furnace was blown in April, 1876, but prior to 1878 no extraordinary product was made, the best week's work being 189.5 gross tons. The stack dimensions were 16 feet bosh, and 55 feet high, it was constructed of red brick banded with iron, and lined with fire brick. (See Fig. 4, page 50.) Blast was supplied by a vertical noncondensing engine, with air cylinder 96 inches in diameter; steam cylinder 48 inches diameter and 7 feet stroke, and heated in two iron-pipe hot ovens, one with 24 the other with 20 pipes, the aggregate heating surface being 2.508 square feet. Steam was gen-

*See Transactions American Institute of Mechanical Engineers, Vol. VIII, page 175.

erated in six cylindrical boilers, 48 inches in diameter, and 70 feet long, and one tubular boiler. The furnace was blown with six tuyeres. In the latter part of 1877 the furnace stack was placed under the management of Mr. Edgar S. Cook, the engine, hot blast boilers, etc., remaining as before, but the proportions of the stack, (or lines) were arranged to suit the requirements of the furnace, making mill iron a specialty and adapted to the ores to be used. The blast or campaign continued for 105 weeks, making an average of 356.2 tons of pig iron per week, a marked increase with the same equipment, over the previous operation of the furnace.

The consumption of coal for the campaign (anthracite coal only being used) averaged 1.2875 tons (2884 pounds) per ton of iron—including the filling of the furnace. The ores used average 45.9 per cent. and 0.6875 gross tons (1540 pounds) of limestone were required per ton of pig iron.

During the blast the monthly maxima and minima were:

| | Maxima. | Minima. |
|---|---|---|
| Gross tons of pig iron made, ... | 1728.5 | 1143.5 |
| Gross tons of anthracite used per ton of pig iron,..... | 1.375 | 1.2125 |
| Yield of iron ore in furnace, per cent., ..... | 47.4 | 42.5 |

The record exhibits a remarkable uniformity in all the operations up to the last, when the furnace was forced to blow out, as the lining had so worn away as to permit part of the backing to fall in.

The operation of the plant had been so satisfactory that the stack was relined to the same shape as before, which is shown by Fig. IV, page 50. The principal dimensions were as follows:

| | Feet. | Inches. |
|---|---|---|
| Diameter of crucible, ..... | 7 | 5 |
| Diameter of bosh, ..... | 16 | 0 |
| Height of bosh from bottom, ..... | 21 | 6 |
| Diameter at stock line, ..... | 10 | 0 |
| Diameter of bell, ..... | 7 | 0 |
| Total height of furnace, ..... | 55 | 0 |

Six tuyeres—centers 5 feet from bottom of furnace.

In March, 1880, the furnace was again started and continued to work uniformly and regularly up to June, when it went out of blast under peculiar circumstances; this short blast—less than ten weeks—producing 3,777½ gross tons of pig iron, showing a still further improvement.

The following record of Warwick furnace for this short blast of 1880 is presented to illustrate the details of the operation of a blast furnace.

*Record of Warwick Furnace Blast of 1880.*

| Weeks. | Cubic feet of air per minute. | Pressure in pounds. | Cubic feet of air per ton of iron. | Cubic feet of air per pound of coal. | Gross tons of coal per ton of iron. | Yield of ore, per cent. | Gross tons of iron made. | Temperature of blast degrees. | Temp. gas at tunnel head. Degrees. | Stops in minutes. | Per cent of coal to ore. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | F. | F. | | |
| 1st.* | | | | | | | 269½ | | | | 60.1 |
| 2d. | 8796.2 | 7.9 | 232,713 | 74.5 | 1.375 | 43.48 | 364½ | 774 | | 437 | 58.8 |
| 3d. | 8957 | 8.3 | 238,185 | 78 | 1.3625 | 43.20 | 356 | 757 | | 593 | 54.7 |
| 4th. | 8444.6 | 8.7 | 211,503 | 74.5 | 1.2625 | 43.20 | 380½ | 770 | 413 | 550 | 55.3 |
| 5th. | 8444.6 | 7.1 | 192,974 | 69.6 | 1.2375 | 44.70 | 425 | 827 | 327 | 368 | 57.1 |
| 6th. | 8444.6 | 7.4 | 197,789 | 71.0 | 1.2375 | 46 00 | 410 | 800 | 340 | 477 | 56.4 |
| 7th. | 8444.6 | 8.3 | 207,419 | 74.1 | 1.2500 | 45.15 | 393 | 815 | 363 | 427 | 54.5 |
| 8th. | 8444.6 | 8.3 | 201,200 | 74.5 | 1.2000 | 45.15 | 406½ | 840 | 357 | 395 | 56.3 |
| 9th. | 8444.6 | 7.4 | 198,041 | 72.3 | 1.225 | 45.90 | 412½ | 850 | 401 | 418 | 55.9 |
| 10th.† | 8444.6 | 7.7 | 200,432 | 71.9 | 1.2500 | 44.90 | 290½ | 845 | 350 | 305 | |
| Friday, June 4, 1880. | | | | | | | 6 | | | | |
| Last cast made, | | | | | | | 9½ | | | | |
| Total, | | | | | | | 3777½ | | | | |

* First six days. † First five days of the week.

The column giving the cubic feet of air per minute indicates the rate at which the blowing machinery was operated; the quantities being calculated from piston displacement are somewhat in excess of the actual volume delivered.

The pressure record was taken at the furnace, and would be somewhat greater at the engine to overcome the friction in connections and hot-blast stoves. The quantities of air calculated as required per ton of iron made and per pound of coal consumed, being based on the engine delivery, are somewhat in excess of the actual consumption. The two columns of temperature indicate respectively the heat of the blast entering the furnace and the temperature of the escaping furnace gases.

The time lost each week in stoppage for various reasons is given in minutes, it practicaly varies from 5 to 9 hours per week, equivalent to from 3 to 5.5 per cent. off the total time. An appreciation of the losses due to stopping a furnace subsequently caused a material reduction in time lost.

The column showing the per cent. of coal to ore, demonstrates the quantity of fuel which was fed to the furnace with each 100 pounds of ore.

When the stack was cleaned out after this short blast the inwalls were found to be in good condition, with no indications of cutting or irregular action, but the boshes were destroyed for 10 feet above the tuyeres, and for the remaining distance partly fused and cintered, being worn as shown by the irregular dotted lines (Fig. 4, page 50.) The boshes were originally 32 inches thick made of two 16 inch fire clay blocks. When the furnace stopped they were only 5 to 8 inches

thick for 8 to 10 feet above the tuyeres, and the furnace had been cut away in ten weeks nearly to what it had been in two years in the former blast, but in the latter case no holding ground was left for the stock. The sectional view of the furnace clearly illustrates the way fire brick is destroyed during campaigns of normal and of abnormal operation.

The experience of the next five years furnished opportunities to study and to partially explain the operation, and some of the causes of the short blast described, and of another short blast of two months, and a subsequent continuous campaign of nearly five years during which time remarkable results were achieved, chiefly with anthracite coal, in a furnace whose details of original construction will scarcely be admitted as embodying advanced ideas, its height being but 55 feet, with a bosh diameter of 15 feet 6 inches, its bosh slope comparatively flat, its crucible small, and the heat of the blast never reaching 1,000 degrees Fahrenheit.

After the first short blast the only repairs made were to put in a new bosh, 15 feet 6 inches in diameter, and to extend it 2 feet higher, making the top of the bosh 23 feet from the bottom. The in-wall was not touched. When the furnace was cleaned out after the second short blast, the bosh was found to be essentially in the same shape as at the conclusion of the previous blast, as shown (see page 50) with the exception that a larger amount of brick had been cut out, the diameter at corresponding sections being from 3 inches to 6 inches greater than before. In making the repairs, the bosh was merely patched up with 9 inch fire brick, and an effort was made to hold the bosh to certain fixed dimensions by means of a series of one inch iron pipe coils running vertically, and arranged in sections all around the furnace, water passing through them to cool the brick work. The furnace was blown in again, December, 1880, continuing in operation to September, 1885.

The following table will show the results of this long campaign:

*Resume of the Long Blast of the Warwick Furnace, Pennsylvania.*

| Year Ending. | Gross tons of iron made. | Percentage of foundry and gray forge grades. | Average yield of ores. Per cent. | Fuel consumption per ton of iron. Pounds. | Character of Fuel. | Limestone per ton of iron. Gross tons. | Average air per minute. Cubic feet. | Average temperature of blast. Degrees F. | Weekly Stoppages. H. | Weekly Stoppages. M. | Tuyeres lost. | Average pressure of blast. Pounds. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dec. 15th, 1881. | 18,290 | 93.28 | 47. | 3,270 | Anthracite. | 0.912 | 8,233 | 896 | 7 | 19 | 12 | 6.7 |
| Dec. 15th, 1882. | 19,762 | 93.2 | 47.5 | 3,136 | ¾ Anthracite. ¼ Coke. | 0.920 | 8,233 | 900 | 7 | 11 | 7 | 4.6 |
| Dec. 15th, 1883. | 21,676 | 94.76 | 50.2 | 2,884 | ¾ Anthracite. ¼ Coke. | 0.875 | 8,374 | 869 | 8 | 14 | 12 | 5. |

*Resume of the Long Blast of the Warwick Furnace, Pennsylvania*—Continued.

| Year Ending. | Gross tons of iron made. | Percentage of foundry and gray forge grades. | Average yield of ores. Per cent. | Fuel consumption per ton of iron. Pounds. | Character of Fuel. | Limestone per ton of iron. Gross tons. | Average air per minute. Cubic feet. | Average temperature of blast. Degrees F. | Weekly Stoppages. H. | Weekly Stoppages. M. | Tuyeres lost. | Average pressure of blast. Pounds. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dec. 15th, 1884. | 22,892 | 95.4 | 50.2 | 2,884 | ¾ Anthracite. ¼ Coke. | 0.737 | 8,972 | 851 | 5 | 22 | 13 | 6.76 |
| Sept. 1st, 1885.* | 18,715½ | 95.1 | 54.9 | 2,436 | ¾ Anthracite. ¼ Coke. | 0.637 | 9,844 | 813 | 8 | 07 | 10 | 6. |
| Totals and Averages. | 101,335½ | 94.4 | 50.5 | 2,920 | | 0.804 | 8,727 | 866 | 7 | 13 | 54 | 5.99 |

* Eight and a half months; the furnace year was from December 15th of one year to the same date of the next year.

In this table the percentage of foundry iron indicates the general character of the metal made, and explains in part the fuel consumption. The time lost in stoppage averaged 4.3 per cent. of the total. The number of tuyeres lost is introduced as indicating one of the items of cost in furnace operation, due to tuyeres being burned out.

While the above shows the average work during the long blast the following will illustrate what was temporarily achieved.

*Record of Best Weekly Work.*

| Years. | Gross tons of iron made. | Gross tons of fuel per ton of iron. | Average yield of ore. Per cent. | Average temperature of the blast. Degrees. |
|---|---|---|---|---|
| 1881, . . . . . | 433½ | 1.25 | 44.5 | 806 |
| 1881, . . . . . | 407½ | 1.3 | 52.3 | 875 |
| 1882, . . . . . | 453½ | 1.25 | 51.5 | 800 |
| 1883, . . . . . | 480½ | 1.1 | 58.8 | 825 |
| 1884, . . . . . | 516 | 1.15 | 55.9 | 833 |
| 1885, . . . . . | 615½ | 0.95 | 58.3 | 840 |
| Average of best 8 consecutive weeks, 1885. | 570 | 0.9825 | 58.4 | 843 |

During the last thirty-five weeks of the blast there was weighed into the furnace.

32,872 gross tons of ore.
14,746 gross tons of anthracite coal.
4,915 gross tons of coke.
11,556 gross tons of limestone.

A total of 64,089 gross tons.

From which 18,080 gross tons of pig iron were made, showing a consumption of 3.545 tons of stock to produce one ton of pig iron, of which 1.087 tons were fuel, and 2.458 tons were ore and flux.

Improved practice had therefore increased the average weekly product to 516.5 tons, i. e. in seven years the average output of the furnace had been nearly trebled.

The pipe ovens which had been in constant use for nearly ten years with no costly repairs whatever, were constructed to heat about 5,000 cubic feet of air per minute, having a total heating surface of 2,508 square feet.

The company having made extensive repairs to the stack, built four sections (24 pipes each) of the Durham-Cooper hot blast stove, changing the gas flues and the hot and cold blast pipes to suit. Few alterations were made in the shape of the relined furnace, the inwall being exactly the same as before. The crucible was made 8 feet 9 inches in diameter instead of 6 feet 6 inches,the diameter of the bosh remaining 15½ feet as formerly, but the thickness of the bosh walls was 18 inches instead of 42 inches. Below the tuyeres the crucible wall was built 32 inches thick.

Another campaign was started at the close of 1885, and in 180 weeks a total of 107,595.5 gross tons of pig iron were obtained, equivalent to a weekly average of 598 gross tons, showing a material improvement in output. The following table gives the yield of the ores used, the fuel consumed per ton of product (three-fourths coke, one fourth anthracite) and the amount of iron made in each calendar year.

*Record of Blast at Warwick Furnace 1886–1889.*

| During. | Average yield of ore. Per cent. | Fuel consumed per ton of iron. Pounds. | Gross tons pig iron made. |
|---|---|---|---|
| 1886, . . . . . | 52.1 | 2,746 | 30,629.5 |
| 1887, . . . . . | 51.1 | 2,672 | 30,660.5 |
| 1888, . . . . . | 53.5 | 2,598 | 32,738.5 |
| 1889 (portion of), . | 55.1 | 2,981 | 13,567.0 |

The worn condition of the furnace is apparent in the fuel consumption for the part of 1889, and when the furnace was blown out it was decided to rebuild the stack. The brick structure on piers (Fig.

4, page 50), was therefore razed, and in its stead one of iron 70 feet high was erected upon the old foundations. This structure was carried on seven cast iron columns supporting a mantle ring of the same material upon which rested the shaft of the furnace, inclosed by a sheet steel casing (see Fig. 5, page 50). A bosh jacket inclosing vertical pipe coils in the crucible walls was added, the plant generally overhauled and a more powerful blowing engine was put in place. After these improvements were completed another campaign was started in October, 1889, which lasted until July, 1892, and in 144 weeks 106,977.5 gross tons of pig iron were produced, or an average per week 743 gross tons. The operation of the furnace showed continued progress, both in greater yield obtained from the furnace, and in smaller fuel consumption as exhibited by the following statement. The improved quality of the ores used is to be credited with a part of this economy.

*Record of Blast at Warwick Furnace 1890–1892.*

| During. | Average yield of iron ores. Per cent. | Fuel consumption per ton of iron made. Pounds. |
|---|---|---|
| 1890, . . . . . | 59 | 2,451 |
| 1891, . . . . . | 62.1 | 2,550 |
| 1892 to July, . . . . . | 62 | 2,720 |

During the campaign the furnace was driven rapidly 803 tons per week being obtained for a number of consecutive weeks.

The furnace was again blown in in October,1892, after being idle for several months, during which important improvements were made. These included renewing the crucible and bosh, and inserting Gayley bosh cooling plates, except at the upper bosh where a coil is used. The iron pipe stoves erected in 1885 were razed and three 20x60 feet Hugh Kennedy hot blast stoves (see Fig. B, page 80) were erected. The gas connections were also changed, and new appliances for burning the gas put in place. The furnace is still in operation as this paper is written, and the results so far obtained are summarized as follows:

*Record of Blast at Warwick Furnace 1893–1894.*

| During. | Average yield of iron ores. Per cent. | Fuel consumption per ton of iron made. Pounds. | Gross tons of pig iron made. |
|---|---|---|---|
| 1893, . . . . . | 61 | 2,250 | 50,957.5 |
| 1894, . . . . . | 63 | 2,327 | 50,586.5 |

In 1894 the furnace ran for two months on all anthracite because of a coke strike, this combined with a flood which suspended work at the furnace for a few days, accounts for a larger average fuel consumption with richer ores than appears in 1893, when one-half coke and one-half anthracite coal were charged. The comparative values of anthracite coal and coke as used may be illustrated by the statement that the weekly average output of the Warwick furnace for 1893 was 980 gross tons, but for the two months in 1894 during which anthracite only was used the weekly output was but 737 gross tons, while for 44 weeks when one-half coke and one-half anthracite were fed as fuel, and the other materials were identical, the average product was 1,015 gross tons.

It will be noticed that all the changes mentioned have assisted in obtaining improved results, but the most prominent factor in this advance has been the joint application of practical and technical knowledge of iron manufacture.

A resume of the operation of Warwick furnace shows that in 17 years its annual product has grown from 17,000 to 51,000 tons, and that this growth has been due to a continuous improvement. Its best weekly record to 1878 was 189.5 tons, but in 1894 1,147 tons were made in one week. From 1881 to 1885 the average fuel consumption per ton of iron made was 2,920 pounds, from 1886 to 1889, 2,710 pounds, from 1890 to 1892, 2,562 pounds, while for 1893 and 1894 it was 2,287 pounds.

An analysis of the statements which have been presented indicate that the yield of ore, character of fuel, furnace equipment and technical knowledge have all led up to the present economy of fuel and large product.

Examination of items of cost kindly permitted by Mr. Cook show that the per diem rate of wages for ordinary labor was practically the same during 1894 as in 1878, but the increased output and better application of labor made the charge for this per ton of product in 1894, less than 70 per cent. of what it was in 1878. Similarly, care in selecting, preparing and grading ores made it possible in 1893 to purchase enough ore yielding 61.7 per cent. in the furnace to make a ton of pig iron for 40 cents less than a sufficient quantity of 45 per cent. ore cost in 1878. The reduced fuel consumption made it possible in the same year to supply one-half coke and one-half anthracite for 65 cents less per ton of iron made in 1893, than the larger quantity of anthracite alone cost in 1878. The richer ores and reduced fuel demanded less flux, and this item is but 60 per cent. of what it was in 1878. If in addition to these items, the interest on investment, the allowance for management, fixed charges and depreciation is divided by an enlarged output, some reasons for the low costs of production are manifest.

*The Results at the Warwick Furnace and a Southern Furnace Compared.*

As comparisons are made on the pages following of the relative costs of pig iron made in Pennsylvania, and in some of the Southern states the following record is offered of the operation of a blast furnace (75 feet x 16 feet) at Cowan, Tennessee, which smelts Tennessee hematites with local coke, and covers eleven months (March, 1894 to January, 1895, inclusive), during which time the furnace was in actual operation 307 days, having been banked 17 days during January, 1895.

*Record of Sewanee Furnace, Cowan, Tenn.*

| Date. | Pig iron. Gross tons. | Average daily product. Gross tons. | Per cent. of foundry iron made. | Limestone used per ton of made. Gr. tons. | Tons of coke used per ton of made. | Yield of ore. Per cent. |
|---|---|---|---|---|---|---|
| March, 1894, . . . . . | 3,656 | 135.4 | 92.2 | 0.67 | 1.20 | 50 |
| April, 1894, . . . . . | 4,238 | 146 | 90 | 0.61 | 1.20 | 50 |
| May, 1894, . . . . . | 4,491 | 145 | 97.8 | 0.65 | 1.18 | 47.5 |
| June, 1894, . . . . . | 4,264 | 147 | 59.3 | 0.644 | 1.21 | 50.4 |
| July, 1894, . . . . . | 3,595 | 138.7 | 80 | 0.75 | 1.29 | 51.6 |
| August, 1894, . . . . . | 4,564 | 147.2 | 69 | 0.64 | 1.25 | 50.2 |
| September, 1894, . . . | 4,137 | 13..5 | 75 | 0.66 | 1.25 | 49 |
| October, 1894, . . . . | 5,069 | 163.6 | 92 | 0.60 | 1.24 | 50.6 |
| November, 1894, . . . | 4,824 | 160.8 | 80.5 | 0.67 | 1.23 | 50.7 |
| December, 1894, . . . | 4,871 | 157.4 | 83 | 0.68 | 1.29 | 51.6 |
| January, 1895, . . . . | 2,015 | 144 | 89 | 0.67 | 1.47 | 51 |
| Total product and averages for 11 months, . | 45,724 | 148.9 | 84 | 0.66 | 1.244 | 50.25 |

*The Durham Anthracite Furnace of 1876.*

As a connecting link between the three eras, a statement concerning the operations of the modern Durham blast furnace may be added to the data concerning the Durham charcoal stack in operation from 1727 to 1791 as given on page 29, and the two Durham anthracite stacks which were run from 1848 and 1850 to 1874 as recorded on page 61. This modern plant was erected and first blown in in 1876, the following data concerning it being excerpted from the Transactions of the American Institute of Mining Engineers, Vol. XVIII, page 380-387, covers the interval from 1879 to 1889.

The furnace (see page 67) was an iron shell resting on iron columns. The total height was 74 feet, and the interior was lined with fire brick so as to give during the various blasts, bosh diameters from 19 to 20 feet and crucible diameters of from 7 feet to 11 feet 4 inches, 5 or 7 tuyeres were used, the following results being obtained:

*Summary of Seven Blasts of the Durham Furnace.*

| Number of blast. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Weekly average product, gross tons, | 282.51 | 313.29 | 413.51 | 480.87 | 599.00 | 637.83 | 691 25 |
| Daily average product, gross tons, . | 40.36 | 44.75 | 59.07 | 68.69 | 85.56 | 91.12 | 98.75 |
| Fuel consumed per ton of iron, . . | 1.467 | 1.383 | 1.288 | 1.268 | 1.228 | 1.211 | 1.206 |
| Proportion of coke to anthracite, per cent, . . . . . | None. | None. | 11.25 | 19.07 | 18.50 | 23.92 | 34.43 |
| Percentage of iron yielded by ores, | 46.82 | 51.38 | 50.57 | 53.79 | 53.33 | 52.53 | 53.65 |
| Percentage of limestone to ore charged, . . . . . | 55.00 | 53.29 | 54.88 | 56.34 | 59.42 | 52.52 | 54.23 |
| Cubic feet of air required per minute, while running, piston displacement, . . . . . | 10,160 | 9,698 | 11,385 | 13,355 | 15,618 | 16,440 | 17,518 |
| Cubic feet of air, piston displacement, required for one pound of fuel, . . . . . | 95.44 | 92.04 | 87.58 | 89.09 | 86.35 | 86.37 | 86.02 |
| Pressure of blast, pounds, . . . . . | 8.50 | 8.30 | 8.09 | 8.25 | 9.60 | 9.03 | 10.15 |
| Temperature of blast, Fahr., . . . | 750° | 885° | 868° | 900° | 960° | 990° | 958° |
| Diameter bosh, feet and inches, . . | 19'-6" | 19'-6" | 20' | 20' | 19' | 19' | 19' |
| Total height, feet and inches, . . . | 73'-5" | 73'-5" | 73'-11" | 73'-11" | 73'-11" | 73'-11" | 73'-11" |
| Diameter crucible, feet and inches, | 7'-0" | 7'-6" | 9'-0" | 9'-10" | 11'-4" | 11'-4" | 11'-4" |
| Number of tuyeres used, . . . . . | 5 | 5 | 7 | 7 | 7 | 7 | 7 |

During blasts 1 to 6 inclusive local hematite ores with mixtures of New Jersey magnetites were used, but for blast No. 6, fifteen per cent. blast No. 7, twenty-five per cent. and for blast No. 8, thirty per cent. of foreign ores were charged.

An examination of the above table illustrates the increased output and reduced fuel consumption attained with greater knowledge, while the average yield of ores and the proportions of flux demanded vary less than in the Warwick furnace records.

The volume of air supplied, while possibly influenced by worn machinery, and its temperature, suggest the modifications due to later practice.

The story of the changes in equipment and arrangement of the Warwick furnace, and the rebuilding of the Durham furnace are not unique experiences, for there are few blast furnaces built a decade or more ago which have not been materially altered or improved to meet the increasing demand upon them.

The expenses for reconstructions and additions to plant which progress in iron metallurgy demands are items of considerable importance to all blast furnace proprietors, and a sinking fund must be provided for this purpose which represents a charge for depreciation of plant upon each ton of iron produced.

Any estimate of cost of pig iron is misleading which does not include as items, interest on invested capital, allowances for depreciation of plant, as well as for current repairs, in addition to the costs of materials, labor, superintendence, supplies, etc. But general comparisons of cost of pig iron for different districts can be based upon the relative costs of raw material and labor.

The foregoing data indicates results obtained in Eastern Pennsylvania in blast furnaces depending upon anthracite coal and anthracite mixed with coke, smelting at first local ores, largely magnetites, but lately Lake Superior and foreign ores mixed with magnetities and local hematites.

*Western Pennsylvania Coke Furnace Records.*

To give somewhat similar, and as far as practicable contemporaneous data concerning the practice in Western Pennsylvania where the blast furnaces use Lake Superior iron ore and smelt them with coke, these statements may be supplemented by others copied from a paper read before the American Institute of Mining Engineers in October, 1890 (vide Transactions American Institute of Mining Engineers, Vol. XIX, page 956), by Mr. James Gayley, general manager of the Edgar Thomson Works.

*Abstract of Results of Western Pennsylvania Blast Furnaces.*

| Designation of Furnace. | Year in which furnace commenced the blast. | Cubic capacity of furnace stock. Cubic feet. | Volume of air supplied per minute. Cubic feet. | Total output from blast. Tons. | In First Twelve Full Months. | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Output. Tons. | Average daily output. Tons. | Average coke consumption per ton of iron. Pounds. | Capacity of furnace for one ton of iron per day. Cubic feet. |
| Isabella, . . . . . | 1876 | 15,000 | . . . . . | 117,575 | 28,000 | 76 | 3,000 | 197 |
| Lucy No. 2. . . . . | 1878 | 15,400 | 16,000 | 92,128 | 33,552 | 91 | 2,850 | 169 |
| Edgar Thomson. A, . . | 1880 | 6,396 | 15,000 | . . . . . | . . . . . | *71 | 2,400 | 90 |
| " " B, . . | 1880 | 17,868 | 30,000 | 112,060 | 48,179 | 132 | 2,859 | 135 |
| " " D. . . | 1882 | 21,478 | 27,000 | 90,317 | 65,947 | 180 | 2,570 | 119 |
| " " C. . . | 1885 | 16,680 | †31,000 | 118,000 | 64,998 | 178 | 2,677 | 90 |
| " " D, . . | 1885 | 18,950 | 22,000 | 150,374 | 74,475 | 204 | 2,250 | 92 |
| " " C, . . | 1887 | 17,230 | 24,000 | 203,050 | ‡72,554 | 198 | 2,230 | 87 |
| " " F, . . | 1886 | 19,800 | 27,000 | 224,795 | 88,940 | 244 | 2,150 | 81 |
| " " F, . . | 1889 | 18,200 | 25,000 | . . . . . | §113,000 | 310 | 1,920 | 59 |

* Estimated.

† After running nine months the volume of air was reduced to 28,000 cubic feet.

‡ The second twelve full months, by reason of a continuous blast, show an output of 83,219 tons on 2,396 pounds of coke.

§ Estimated from record made to date of paper.

NOTE:—On the completion of the twelve months in blast of 1889 the record for Furnace F showed an output of 113,526 tons, and an average coke-consumption of 1892 pounds.

In this paper Mr. Gayley says "In the period covered by the last decade there are three steps in the development of American blast furnace practice that might be mentioned, first in 1880, the introduction of rapid driving, with its large outputs and high fuel consumption; second, in 1885 the production of an equally large amount of iron with a low fuel consumption by slow driving; and third, in 1890, the production of nearly double that quantity of iron on a low fuel consumption, through rapid driving."

The construction and operation of the Edgar Thomson plant of blast furnaces at Braddock entitles it to a place in any monograph upon pig iron manufacture in Pennsylvania, for this works has undoubtedly been in the lead in modern practice both as to the large quantities of metal produced, and the low fuel consumption. In discussing the paper of Mr. Gayley above referred to, Sir Lowthian Bell, the acknowledged British authority on iron, says "the problem before us is to account, if we can, for a furnace producing about five times as

much iron as we have hitherto made in Cleveland (England) from our poorer ore, and about twice as much as has been obtained from our English hematite furnaces of like dimensions." He also compares contemporaneous results obtained by the Cleveland (England) furnaces and by the Edgar Thomas Pennsylvania furnaces, which emphasizes the difference between the materials used, and the practice in Great Britain and at the Edgar Thomas works, and is here introduced to show the position which has been achieved by Pennsylvania blast furnace managers; for while the work of the Edgar Thomson plant is excellent, other blast furnaces in the State have produced results which compare favorably with it.

*Bell's Comparison of British and American Furnace Practices.*

| Working-Conditions. | Cleveland, England. | Edgar Thomson Pennsylvania. |
|---|---|---|
| Cubic contents of furnace, cubic feet, | 25,500 | 18,200 |
| Temperature of blast, | 704° C | 593° C |
| Coke consumed per ton of iron, | 19.99 cwts. | 16.80 cwt. |
| Limestone " " | 11.00 " | 9.03 " |
| Ore " " | 48.00 " | 32.26 " |
| Weight of blast per ton of iron, | 87.15 " | 71.20 " |
| Weight of gases, " | 119.47 " | 100.10 " |
| Temperatnre of gases, " | 250° C | 171° C |
| Weekly product of iron per 1,000 cubic feet of furnace-capacity, | 21.57 tons | 128.00 tons* |
| Slag produced per ton of iron, | 28.00 cwt. | 10.71 cwt. |
| Calories, or heat units, | 88,577 | 69,569 |

*Average of 3½ years, 2,333 tons per week.

To appreciate the full significance of these figures, Mr. Bell prepared another table in which the differences in the various factors are illustrated by corresponding variations in the appropriation of heat, the equivalents in coke being also given:

| Heat-Requirements. | Cleveland. Calories, or Heat Units. | Cleveland. Equivalent Coke, Lbs. | Pittsburgh. Calories. | Pittsburgh. Equivalent Coke, Lbs. |
|---|---|---|---|---|
| Reduction of peroxide of iron, | 33,108 | 7.47 | 33,108 | 8.00 |
| Reduction of metalloids in pig iron, | 4,174 | 0.94 | 2,631 | 0.64 |
| Dissociation of carbonic oxide, | 1,440 | 0.33 | 1,460 | 0.35 |
| Fusion of pig iron, | 6,600 | 1.49 | 6,600 | 1.59 |
| Evaporation of water in coke, | 275 | 0.06 | 83 | 0.02 |
| Decomposition of water in blast, | 2,380 | 0.54 | 2,333 | 0.56 |
| Expulsion of carbonic acid from limestone, | 4,070 | 0.92 | 3,094 | 0.75 |
| Reduction of this carbonic acid to carbonic oxide, | 4,224 | 0.95 | 3,488 | 1.42 |
| Fusion of slag, | 15,400 | 3.48 | 5,890 | 0.84 |
| Carried off in gases, | 7,166 | 1.60 | 5,013 | 1.21 |
| Lost by radiation, convection, tuyere-water, etc., | 9,740 | 2.21 | 5,869 | 1.42 |
| Totals, | 88,577 | 19.99 | 69,569 | 16.80 |

This is introduced for the purpose of showing what takes place in a blast furnace when in operation, and to indicate the proportion of gas, slag or cinder made, and air blown.

*The Edgar Thomson Coke Furnaces.*

The Edgar Thomson present plant embraces nine stacks of the dimensions given below in a table which also shows the date of construction, and the total output of eight of these to the close of the year 1894, a record which is not duplicated elsewhere.

*Table Showing Size and Production of Edgar Thomson Furnaces.*

| Name of Stack. | Size, Feet. | | Date of Construction. | Total Output. Gross Tons. |
|---|---|---|---|---|
| | Height. | Diam. Bosh. | | |
| A, | 65 | 15 | 1879 | Making Spiegeleisen chiefly. |
| B, | 80 | 18 | 1880 | 740,923 |
| C, | 80 | 20 | 1880 | 857,889 |
| D, | 80 | 21 | 1882 | 872,744 |
| E, | 80 | 21 | 1882 | 862,275 |
| F, | 90 | 22 | 1886 | 795,323 |
| G, | 90 | 22 | 1887 | 716,042 |
| H, | 90 | 22 | 1890 | 541,367 |
| I, | 90 | 22 | 1890 | 533,650 |

This plant has therefore produced in its history of 16 years (11 years of which were required to complete it) a total of over six million tons of pig iron. More iron than was produced by the whole of the United States in any one year until 1887.

The above figures it must be remembered allow for necessary stoppages for repairs, interferences due to labor disturbances, etc., but during their operation some of these furnaces have made phenomenal records.

The following will be of interest:

Furnace E, of the Edgar Thomson Steel Works (20′x80′) made from June 27, 1882, to March 13, 1884, a product of 105,741 gross tons of Bessemer iron on a consumption of 2,822 pounds of coke per ton of iron.

Furnace D, with the same lines, made from April 18, 1882, to October 30, 1883, a product of 90,317 gross tons of Bessemer iron on a consumption of 2,620 pounds of coke per ton of iron.

Furnace D, as blown in, September, 1885 (22′x80′) made 210 gross tons of Bessemer iron per day, on 2,050 pounds of fuel per ton of iron, this being the record for seven weeks. The best week's work averaged 218 gross tons daily on 1,993 pounds of coke. The yield of ore in the furnace is 60 per cent. The temperature of blast 1,100 degrees Fahrenheit.

The tabulated statement epitomizes the history of the plant of furnaces connected with the Edgar Thomson works, and their large

THE EDGAR THOMSON STEEL WORKS AND BLAST FURNACES, BESSEMER.

producing capacity, but the following memoranda of the operation of the plant during one month (November, 1894), will show the quantities of material handled and produced, number of men employed, etc. During the month under consideration the nine furnaces were in blast, producing 86,268 tons of pig iron, an average of 2,875.6 gross tons per day. Of this amount 60 tons of ferro-manganese (an alloy of iron and manganese used in the Bessemer converters for recarburization) was produced in the A furnace. The eight other furnaces, lettered from B to I inclusive, made Bessemer iron, and during week days ran most of this into ladle cars, the Sunday casts however being run into pigs.

The average number of men employed in connection with the blast furnace work during the month was 1850, this includes superintendents, clerical force, all employes working about the furnaces, the furnace office and laboratory, those who received and unloaded stock, those who transported the molten metal to the two iron mixers, the force employed at the mixers, and the hands who delivered the iron from the mixers to the Bessemer steel converters, as well as those who conveyed the cinder to the dump. This force of labor embraced the crews necessary to operate locomotives, which are kept busy shifting the 600 cars of raw materials required to feed the furnaces daily, and moving the iron and cinder from the furnaces. The above figures show that at the Edgar Thomson blast furnace plant 1.55 tons of pig metal are produced for each day's labor.

A considerable portion of the force employed around a blast furnace plant of the proportions of the Edgar Thomson is necessarily skilled, and therefore commands wages above the average. In this category are embraced superintendent, foremen, furnace keepers, engineers, chemists, the necessary force of masons, machinists, carpenters, blacksmiths, locomotive engineers, weighmen, mixer tenders, etc., all of which were included in the above statement.

The following tribute to the impetus given to iron metallurgy by Pennsylvania's largest iron industry is especially valuable because it comes from M. E. C. Potter,* who as former general manager of the South Chicago, Ill., plant, working the blast furnaces under his control in practical rivalry with the Edgar Thomson plant, achieved results which make the two great industries set the pace for the world.

"The blowing in of the Edgar Thomson "A" furnace in 1879, marked the beginning of a new era in the science of iron smelting if, indeed, it was not the very birth of science as applied to this industry in the United States. Back of that we find only the dead level of mediocrity or worse, a disposition to 'let well enough alone,' a

* Vide transactions American Institute of Mining Engineers, Vol. 23, p. 370.

general, almost universal, employment of 'rule of thumb' methods. The application of scientific principles and methods were rare and, indeed, previous, to the introduction of the Bessemer process in the early seventies, science had no place in controlling the operations of the American blast furnace. The old practice consisted mainly in dumping raw materials in at the top of the furnace and tapping out iron and slag at the bottom, for the successful consummation of which the furnace manager directed his best energies toward keeping the furnaces as free as possible from "gobbing' with, alas, but indifferent success.

"The introduction of the Bessemer process was the first rude awakening of the easy-going furnacemen. They learned, then, some of them for the first time, that there was such a thing as phosphorus. Sulphur was the one chemical element with which they already had some acquaintance, and their remedy for that was a full diet of fuel and lime; simple and efficacious, but how expensive they never knew. When pig iron was selling at from $40 to $50 per ton it did not much matter. With the recognition of phosphorus as an enemy, capable of spoiling a lot of otherwise good iron, the chemist appeared for the first time on the scene. Soon the Besssemer process introduced to the notice of the perplexed furnaceman another most important factor, namely, silicon. In his efforts to keep silicon within bounds he found sulphur asserting itself to his distraction. The chemist became more and more the manager's main stay in his hour of trial. Soon the chemist himself was the manager and the new era had fairly dawned."

"Of much more ample dimensions, 'B' furnace leaped into fame with a weekly product of 1,200 tons, being the first furnace in the world to produce so large an amount. Furnaces 'C,' 'D' and 'E' followed in rapid succession, each eclipsing its predecessor in output until 1,400 to 1,500 tons per week came to be the regular thing, and the Edgar Thomson plant became the Mecca of furnace managers and owners from Europe as well as America.

"As if to further tax the patience and abilities of furnace managers there came into use almost simultaneously with the new regime the method, strange to America at least, of taking the pig iron direct from the furnaces in a molten condition to the Bessemer converters, known in this country as 'the direct metal process.' The limitations which this procedure places upon the operations of the blast furnace are extraordinary, confining the furnace manager to very narrow fluctuations in the chemical composition of the product, as well as the temperature of the furnace itself. In fact, after many years of faithful and well directed effort, it has been deemed impracticable to depend wholly upon the steady maintenance of uniformity in the furnace operations, and an apparatus has been devised

to equalize the variations of both chemical composition and temperature of the furnace product. This apparatus, known as a 'mixer,' was devised by the late Captain W. R. Jones, of the Edgar Thomson works."

## LABOR AT THE OLD AND AT THE MODERN FURNACES.

A force of 1,850 men employed at one blast furnace plant may impress the reader as being large, but when considered in connection with the material handled and work done, the comparison is more favorable. Probably a satisfactory way of appreciating what has been accomplished in the development of the pig iron industry of the State of Pennsylvania will be by formulating an estimate based upon conditions which formerly existed, such estimate being for labor required in the production of an amount of iron fifty years ago, equal to that credited to the Edgar Thomson blast furnace plant in 1894.

Taking the older practice when cold blast charcoal furnaces such as were in use up to about 1840 were the only producers of pig iron and which made 1,000 to 1,200 tons each per annum, it is found that about 800 or 1,000 cold blast charcoal furnaces would be required to produce as much pig metal as the Edgar Thomson furnaces turn out, and that there would have been an army of 12,000 to 18,000 men necessary to operate these furnaces, independently of those who prepared and delivered the fuel, mined and quarried, or delivered the iron ore or flux, and distributed the product, etc.

To produce charcoal for say 900 such blast furnaces would require the constant services of 7,000 wood choppers who would daily clear fully one square mile of average woodland, while 9,000 colliers and assistants and 1,000 horses or mules hauling the wood to the pits, would be employed in converting the wood into charcoal.

It is probable that to supply the coke used by the Edgar Thompson blast furnaces 1,500 miners and 1,000 coke makers are necessary. The labor utilized in transportation of the coke by railroad is difficult to determine, but it would show with equal advantage if compared with the 7,000 horses or mules, 1,500 wagons, and 1,500 teamsters necessary for delivering charcoal to blast furnaces on the assumption that each stack was so located in relation to its wood supply as to permit the team to average two loads of charcoal per day. In addition there are stablemen, farriers, wheelwrights, smiths, etc. The economies in labor which have been gradual, can be traced through the era of development and the technical era, and there is room for further reduction in the handling of materials, etc.

A comparison of figures would show that the production of 1,000 tons of pig iron prior to 1840 required as many days labor imme-

diately about the blast furnace, as are necessary to-day in large plants making 6,000 to 8,000 tons of metal. The same relation holds good for the production of fuel, and in transportation the relative numerical force would show even more favorably for the present. Adding the saving in labor employed to mine ore, quarry stone, etc., it may be safely assumed that the number of days work necessary to produce a given quantity of iron a half a century ago would exceed six or even eight times that which is now required.

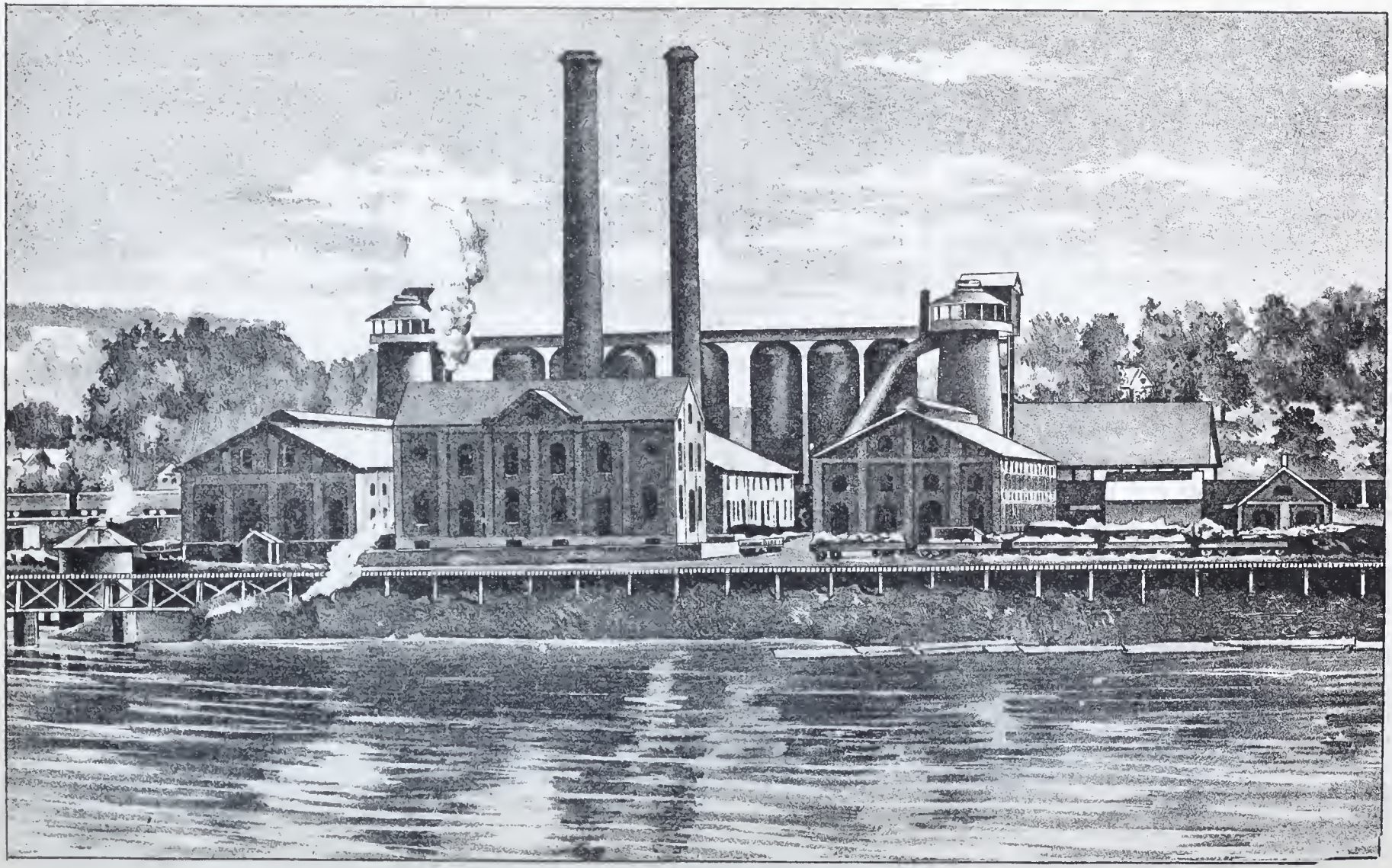
At the present writing the eight furnaces of the Edgar Thomson plant which are operated to produce Bessemer pig metal are averaging an output per furnace of 11,000 gross tons per month, obtained from an ore mixture yielding 60 per cent of iron. The consumption of coke per ton of iron has fallen for a month or more below 1,760 pounds, but a fair average for a full year with allowances for loss and waste will be between 1,900 and 1,950 pounds per ton of iron made.

## LOCATION OF BLAST FURNACES IN PENNSYLVANIA.

The location of the blast furnaces in districts, and the comparatively small area of the State in which they are found is exhibited by the outline map of Pennsylvania, which gives the position of every blast furnace plant reported as on the active list in the latest edition of the Directory of Iron and Steel Works. The plants located farthest east are those near Easton and at Thurlow, while the Shenango Valley furnaces are close to the western border. The furnaces at Emporium and Scranton are the most northern in the State while those at Mont Alto and Thurlow are the most southern.

It will be noticed that there are two general groupings; that in the east embracing the Lehigh, Schuylkill and Susquehanna valleys, that in the west, Allegheny county and the Shenango district, with a number of furnaces scattered through middle Pennsylvania.

A critical revision would probably eliminate some of the plants shown, for, although reported as in condition to operate it is questionable if all those indicated will produce iron in the future. A map made two decades ago would have shown a larger number of furnaces and a wider distribution, and if the location of the plants forming the pig iron industry in 1876 had been mapped the number would have been forty per cent. greater than it is now and a considerably larger area of the State covered. In locating the furnaces so as to show distinctly on a map of a scale sufficiently convenient for this monograph, plants only could be indicated, but when but one stack is shown the symbol is a circle, and when from two to eight stacks are grouped in a plant a square indicates this. No attempt



Monongahela Furnaces, McKeesport, Pa.

has been made to sub-divide the mineral fuel furnaces, but a triangle designates those which are dependent upon a charcoal as fuel. A resume of the plants in Pennsylvania January 1st, 1894, shows the following:

One plant of nine furnaces using mineral fuel.
Two plants of six furnaces using mineral fuel.
Two plants of five furnaces using mineral fuel.
Three plants of four furnaces using mineral fuel.
Six plants of three furnaces using mineral fuel.
Thirty-eight plants of two furnaces using mineral fuel.
Forty-eight plants of one furnace using mineral fuel.
Fourteen plants of one furnace using charcoal.
Total 114 plants with 199 furnaces in Pennsylvania.

The relative position of the State of Pennsylvania and of other states as to number, size, capacity and production of blast furnaces was discussed in two papers which appeared in 1885 and 1887.* From these papers data has been excerpted and combined with some figures taken from the later editions of the Directory of the Iron and Steel Works of the United States, so as to show not only the position which Pennsylvania held at various dates as to the number and size of furnaces reported on the active list but also the changes in dimensions of stacks.

The annexed tables illustrate the range in dimensions and capacities of furnaces using different fuels. The tables are arranged, first, according to date, and second, in the order of the kind of fuel used; three classes only being recognized, namely, those using anthracite coal, or anthracite mixed with coke; those using bituminous fuel, embracing furnaces depending upon coke, raw bituminous coal or raw coal mixed with coke, and furnaces which are operated with charcoal. The tables also represent the maximum and minimum diameters of bosh and the maximum and minimum heights of furnaces at the time they were prepared. In connection with the maxima and minima, average dimensions, carefully determined, are presented merely to indicate in a general way the preponderance of size. The maximum height and maximum diameter, or minimum height and minimum diameter are not necessarily associated with the same furnace, and the calculation of average capacity has been made merely with a view of illustrating at a glance the general proportions of the furnaces in each district of the State.

*Vide transactions of the American Institute of Mining Engineers, Vol. XIV, p. 561, 575, and Vol. XV, p. 690, 699.

# PROPORTIONS OF BLAST FURNACES OF UNITED STATES ON LIST JANUARY 1st, 1885.

## *"A" Coke or Bituminous Coal Used as Fuel.*

| States and Districts. | Number of stacks. | Reported annual total capacity. Net tons. | Dimensions of Furnaces. Height. Maximum. | | Height. Minimum. | | Height. Average. | | Diameter at bosh. Maximum. | | Diameter at bosh. Minimum. | | Diameter at bosh. Average. | | Average capacity per furnace, net tons. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Ft. | In. | Ft. | In. | Ft. | In. | Ft. | In. | Ft. | In. | Ft. | In. | |
| Pennsylvania: | | | | | | | | | | | | | | | |
| Shenango Valley, | 27 | 567,000 | 78 | 0 | 46 | 0 | 59 | 1 | 20 | 0 | 9 | 0 | 13 | 9 | 21,000 |
| Allegheny county, | 16 | 713,500 | 85 | 0 | 45 | 0 | 70 | 8 | 20 | 0 | 12 | 0 | 17 | 6 | 44,600 |
| Miscellaneous, | 39 | 619,700 | 78 | 0 | 28 | 0 | 56 | 2 | 19 | 6 | 8 | 6 | 13 | 6 | 15,900 |
| Total for state, | 82 | 1,900,200 | 85 | 0 | 28 | 0 | 62 | 0 | 20 | 0 | 8 | 6 | 14 | 4 | 23,200 |
| New York, | 1 | 18,000 | .... | | .... | | 65 | 0 | .... | | .... | | 13 | 0 | 18 000 |
| Maryland, | 1 | 8,000 | .... | | .... | | 50 | 0 | .... | | .... | | 11 | 0 | 8,000 |
| Virginia, | 12 | 226,000 | 85 | 0 | 35 | 0 | 59 | 9 | 20 | 0 | 9 | 0 | 13 | 8 | 18,800 |
| Alabama, | 10 | 211,000 | 75 | 0 | 50 | 0 | 63 | 4 | 18 | 0 | 10 | 6 | 14 | 8 | 21,100 |
| Georgia, | 1 | 30,000 | .... | | .... | | 63 | 0 | .... | | .... | | 16 | 0 | 30,000 |
| West Virginia, | 7 | 127,000 | 75 | 0 | 50 | 0 | 60 | 7 | 17 | 0 | 10 | 6 | 14 | 5 | 18,100 |
| Kentucky, | 3 | 57,000 | 68 | 0 | 62 | 0 | 65 | 0 | 16 | 0 | 15 | 6 | 15 | 10 | 19,000 |
| Tennessee, | 8 | 217,500 | 70 | 0 | 61 | 0 | 66 | 2 | 18 | 0 | 13 | 6 | 15 | 10 | 27,200 |
| Ohio, | 64 | 1,288,400 | 86 | 0 | 44 | 0 | 60 | 9 | 20 | 0 | 10 | 6 | 14 | 9 | 20,100 |
| Indiana, | 2 | 18,000 | 60 | 0 | 52 | 0 | .... | | 13 | 0 | 12 | 0 | .... | | 9,000 |
| Illinois, | 16 | 667,000 | 75 | 0 | 60 | 0 | 69 | 3 | 21 | 0 | 14 | 6 | 18 | 0 | 41,700 |
| Missouri, | 8 | 168,000 | 75 | 0 | 56 | 0 | 60 | 6 | 20 | 0 | 14 | 0 | 15 | 8 | 21,000 |
| Michigan, | 2 | 30,000 | 63 | 0 | 60 | 0 | .... | | 17 | 0 | 12 | 0 | .... | | 15,000 |
| Wisconsin, | 3 | 77,000 | 66 | 0 | 55 | 0 | 62 | 4 | 17 | 0 | 15 | 0 | 16 | 4 | 25,700 |
| Colorado, | 1 | 24,000 | .... | | .... | | 65 | 0 | .... | | .... | | 15 | 0 | 24,000 |
| Total for the United States, | 221 | 5,067,100 | 86 | 0 | 28 | 0 | 66 | 0 | 21 | 0 | 8 | 6 | 14 | 11 | 22,900 |

## *"B" Anthracite Coal Used as Fuel.*

| States and Districts. | Number of stacks. | Reported annual capacity. Net tons. | Dimensions of Furnaces. Height. Maximum. | | Height. Minimum. | | Height. Average. | | Diameter at hosh. Maximum. | | Diameter at hosh. Minimum. | | Diameter at hosh. Average. | | Average capacity per furnace, net tons. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Ft. | In. | Ft. | In. | Ft. | In. | Ft. | In. | Ft. | In. | Ft. | In. | |
| Pennsylvania: | | | | | | | | | | | | | | | |
| Lehigh Valley, | 51 | 775,000 | 75 | 0 | 33 | 0 | 61 | 6 | 19 | 0 | 8 | 6 | 16 | 4 | 15,200 |
| Schuylkill Valley, | 44 | 530,600 | 80 | 0 | 40 | 0 | 55 | 3 | 18 | 0 | 11 | 0 | 14 | 4 | 12,000 |
| Upper Susquehanna, | 23 | 284,700 | 70 | 0 | 36 | 0 | 51 | 9 | 20 | 6 | 10 | 0 | 14 | 9 | 12,400 |
| Lower Susquehanna, | 37 | 599,432 | 80 | 0 | 33 | 0 | 52 | 3 | 20 | 0 | 9 | 6 | 13 | 5 | 16,200 |
| Total for State, | 155 | 2,189,732 | 80 | 0 | 33 | 0 | 56 | 1 | 20 | 6 | 8 | 6 | 14 | 10 | 14,100 |
| Massachusetts, | 1 | 10,000 | .... | | .... | | 50 | 0 | .... | | .... | | 14 | 0 | 10,000 |
| New York, | 40 | 556,150 | 71 | 0 | 40 | 0 | 56 | 6 | 18 | 0 | 12 | 0 | 15 | 0 | 13,900 |
| New Jersey, | 20 | 281,200 | 80 | 0 | 20 | 0 | 54 | 9 | 20 | 6 | 7 | 0 | 14 | 6 | 14,100 |
| Maryland, | 5 | 37,000 | 53 | 0 | 32 | 0 | 42 | 2 | 15 | 0 | 11 | 4 | 12 | 6 | 7,400 |
| Total for the United States, | 221 | 3,074,082 | 80 | 0 | 20 | 0 | 55 | 8 | 20 | 6 | 7 | 0 | 14 | 10 | 13,900 |

## "C" Charcoal Used as Fuel.

| States and Districts. | Number of stacks. | Reported annual capacity. Net tons. | Dimensions of Furnaces. Height. Maximum. | Height. Minimum. | Height. Average. | Diameter at bosh. Maximum. | Diameter at bosh. Minimum. | Diameter at bosh. Average. | Average capacity per furnace, net tons. |
|---|---|---|---|---|---|---|---|---|---|
| | | | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft. In. | |
| Maine, | 1 | 5,000 | .... | .... | 55 0 | .... | .... | 9 6 | 5,000 |
| Vermont, | 1 | 4,000 | .... | .... | 40 0 | .... | .... | 10 0 | 4,000 |
| Massachusetts, | 4 | 14,500 | 33 0 | 32 0 | 32 3 | 9 6 | 9 0 | 9 2 | 3,600 |
| Connecticut, | 9 | 35,000 | 40 0 | 31 0 | 34 1 | 9 6 | 9 0 | 9 1 | 3,900 |
| New York, | 14 | 70,000 | 55 0 | 30 0 | 38 4 | 10 6 | 8 6 | 9 4 | 5,000 |
| Pennsylvania, | 32 | 91,590 | 54 0 | 28 0 | 33 1 | 10 8 | 7 0 | 8 6 | 2,900 |
| Maryland, | 14 | 57,200 | 52 0 | 28 0 | 38 9 | 11 0 | 6 6 | 8 9 | 4,100 |
| Virginia, | 31 | 109,225 | 47 0 | 25 0 | 34 3 | 12 0 | 7 6 | 9 1 | 3,500 |
| North Carolina, | 6 | 16,800 | 54 0 | 30 0 | 40 6 | 10 0 | 6 0 | 8 6 | 2,800 |
| Georgia, | 6 | 25,250 | 60 0 | 30 0 | 42 4 | 12 8 | 7 0 | 8 9 | 4,200 |
| Alabama, | 12 | 96,200 | 62 0 | 40 0 | 52 0 | 14 0 | 8 8 | 11 0 | 8,000 |
| Texas, | 2 | 7,000 | 55 0 | 55 0 | .... | 9 6 | 8 6 | 9 3 | 3,500 |
| West Virginia, | 6 | 21,095 | 48 0 | 30 0 | 38 0 | 13 0 | 6 0 | 10 9 | 3,500 |
| Kentucky, | 14 | 59,040 | 50 0 | 17 0 | 39 6 | 14 0 | 6 0 | 9 8 | 4,200 |
| Tennessee, | 9 | 42,460 | 65 0 | 32 0 | 40 10 | 12 0 | 8 0 | 10 6 | 4,700 |
| Ohio, | 21 | 91,400 | 42 0 | 32 0 | 36 8 | 12 0 | 8 6 | 13 0 | 4,300 |
| Indiana, | 1 | 7,000 | .... | .... | 60 0 | .... | .... | 10 1 | 7,000 |
| Missouri, | 9 | 97,125 | 60 0 | 34 0 | 45 0 | 11 0 | 9 2 | 9 8 | 10,800 |
| Michigan, | 26 | 347,115 | 56 0 | 40 0 | 46 9 | 11 4 | 8 0 | 9 2 | 13,400 |
| Wisconsin, | 11 | 89,000 | 52 0 | 27 0 | 42 1 | 10 6 | 7 9 | 10 0 | 8,000 |
| Minnesota, | 1 | 10,000 | .... | .... | 45 0 | .... | .... | 8 0 | 10,000 |
| Utah, | 1 | 4,000 | .... | .... | 45 0 | .... | .... | 10 0 | 4,000 |
| California, | 1 | 12,000 | .... | .... | 45 0 | .... | .... | 10 0 | 12,000 |
| Oregon, | 1 | 8,000 | .... | .... | 42 0 | .... | .... | 10 0 | 8,000 |
| Washington, | 1 | 10,000 | .... | .... | 52 0 | .... | .... | .... | 10,000 |
| Total for the United States, | 234 | 1,330,000 | 65 0 | 17 0 | 39 7 | 14 0 | 6 0 | 9 6 | 5,680 |

## Resume for All Kinds of Fuel.

| States and Districts. | Number of stacks. | Reported annual capacity. Net tons. | Dimensions of Furnaces. Height. Maximum. | Height. Minimum. | Diameter at bosh. Maximum. | Diameter at bosh. Minimum. | Average capacity per furnace, net tons. |
|---|---|---|---|---|---|---|---|
| | | | Ft. In. | Ft. In. | Ft. In. | Ft. In. | |
| Pennsylvania, | 269 | 4,181,522 | 85 0 | 28 0 | 20 6 | 7 0 | 15,545 |
| Other states, | 407 | 5,289,660 | 86 0 | 17 0 | 21 0 | 6 0 | 12,997 |
| United States, | 676 | 9,471,182 | 86 0 | 17 0 | 21 0 | 6 0 | 14,011 |

At the close of the year 1886 there were in the United States 579 blast furnaces reported in the directory as on the active list, an apparent decrease from the above total of 97 stacks; but most of the furnaces dropped from the directory were those which, owing to location, inefficient equipment or failure of ore supplies, etc., were considered likely to remain inactive. On the other hand new plants added to the list, taking the places of some dropped, were mainly of

large capacity, helping to augment the average size and output. The following shows the distribution and proportions of the furnaces at the date named:

## PROPORTIONS OF BLAST FURNACES IN THE UNITED STATES ON LIST JANUARY 1st, 1887.

### *"A" Coke or Bituminous Coal Used as Fuel.*

| States and Districts. | Number of stacks. | Reported annual capacity. Net tons. | Dimensions of Furnaces. Height. Maximum. | Height. Minimum. | Height. Average. | Diameter at bosh. Maximum. | Diameter at bosh. Minimum. | Diameter at bosh. Average. | Average annual capacity. Net tons. |
|---|---|---|---|---|---|---|---|---|---|
| | | | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft. In. | |
| Pennsylvania: | | | | | | | | | |
| Shenango Valley, | 23 | 596,000 | 78 0 | 48 0 | 63 9 | 20 0 | 12 0 | 14 7 | 25,900 |
| Allegheny county, | 18 | 917,000 | 85 0 | 45 0 | 71 7 | 22 0 | 12 0 | 17 6 | 50,900 |
| Miscellaneous, | 32 | 718,200 | 78 0 | 42 0 | 59 7 | 20 0 | 9 0 | 14 3 | 22,400 |
| Total for State, | 73 | 2,231,200 | 85 0 | 42 0 | 63 11 | 22 0 | 9 0 | 15 2 | 30,600 |
| Maryland, | 2 | 17,000 | 50 0 | 50 0 | 50 0 | 11 6 | 11 0 | 11 3 | 8,500 |
| Virginia, | 10 | 234,000 | 85 0 | 48 0 | 63 8 | 20 0 | 11 0 | 14 6 | 23,400 |
| Alabama, | 11 | 280,000 | 75 0 | 50 0 | 64 10 | 18 0 | 10 6 | 15 3 | 25,500 |
| Georgia, | 2 | 60,000 | 63 0 | 60 0 | 61 6 | 16 0 | 13 0 | 14 6 | 30,000 |
| West Virginia, | 6 | 139,000 | 75 0 | 50 0 | 61 8 | 18 0 | 10 6 | 15 0 | 23,200 |
| Kentucky, | 3 | 57,000 | 66 0 | 62 0 | 64 4 | 16 0 | 16 0 | 16 0 | 19,000 |
| Tennessee, | 9 | 280,000 | 75 0 | 61 0 | 68 4 | 20 0 | 13 0 | 16 8 | 31,100 |
| Ohio, | 58 | 1,329,600 | 86 0 | 47 0 | 62 8 | 20 0 | 11 9 | 15 3 | 22,800 |
| Indiana, | 2 | 18,000 | 60 0 | 52 0 | 56 0 | 13 0 | 12 0 | 12 6 | 9,000 |
| Illinois, | 16 | 729,400 | 80 0 | 60 0 | 71 9 | 21 0 | 14 0 | 17 11 | 45,600 |
| Missouri, | 8 | 168,000 | 75 0 | 56 0 | 62 6 | 20 0 | 15 0 | 16 3 | 21,000 |
| Michigan, | 1 | 15,000 | .... | .... | 63 0 | .... | .... | 17 0 | 15,000 |
| Wisconsin, | 3 | 87,000 | 66 0 | 55 0 | 62 4 | 17 0 | 15 0 | 16 4 | 29,000 |
| Colorado, | 1 | 24,000 | .... | .... | 65 0 | .... | .... | 15 0 | 24,000 |
| Total for the United States, | 205 | 5,669,200 | 86 0 | 42 0 | 64 0 | 22 0 | 9 0 | 15 6 | 27,700 |

### *"B" Anthracite Coal Used as Fuel.*

| States and Districts. | Number of stacks. | Reported annual capacity. Net tons. | Dimensions of Furnaces. Height. Maximum. | Height. Minimum. | Height. Average. | Diameter at bosh. Maximum. | Diameter at bosh. Minimum. | Diameter at bosh. Average. | Average annual capacity. Net tons. |
|---|---|---|---|---|---|---|---|---|---|
| | | | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft. In. | |
| Pennsylvania; | | | | | | | | | |
| Lehigh Valley, | 48 | 821,000 | 81 0 | 33 0 | 61 11 | 19 0 | 8 6 | 16 1 | 17,100 |
| Schuylkill Valley, | 45 | 670,040 | 80 0 | 40 0 | 56 9 | 18 0 | 12 0 | 14 6 | 14,900 |
| Upper Susquehanna, | 18 | 253,700 | 70 0 | 36 0 | 53 9 | 20 6 | 12 0 | 15 2 | 14,100 |
| Lower Susquehanna, | 37 | 609,232 | 80 0 | 36 0 | 54 7 | 20 0 | 9 6 | 13 8 | 16,500 |
| Total for State, | 148 | 2,353,972 | 81 0 | 33 0 | 56 8 | 20 6 | 8 6 | 14 10 | 15,900 |
| New York, | 33 | 621,900 | 80 0 | 42 0 | 60 3½ | 18 0 | 12 6 | 13 9 | 18,800 |
| New Jersey, | 18 | 290,100 | 80 0 | 30 0 | 59 0 | 20 6 | 8 0 | 15 5 | 16,100 |
| Maryland, | 4 | 31,000 | 53 0 | 32 0 | 41 3 | 15 0 | 12 0 | 12 9 | 7,800 |
| Total for the United States, | 203 | 3,296,972 | 81 0 | 30 0 | 57 1 | 20 6 | 8 0 | 14 8 | 16,200 |

## "C" Charcoal Used as Fuel.

| States and Districts. | Number of stacks. | Reported annual capacity. Net tons. | Dimensions of Furnaces. Height. Maximum. | Height. Minimum. | Height. Average. | Diameter at bosh. Maximum. | Diameter at bosh. Minimum. | Diameter at bosh. Average. | Average annual capacity. Net tons. |
|---|---|---|---|---|---|---|---|---|---|
| | | | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft. In. | |
| Maine, | 1 | 5,000 | . . . . | . . . . | 50 0 | . . . . | . . . . | 9 0 | 5,000 |
| Massachusetts, | 4 | 14,500 | 33 0 | 32 0 | 32 3 | 9 6 | 9 0 | 9 2 | 3,600 |
| Connecticut, | 9 | 39,000 | 40 0 | 31 0 | 34 1 | 10 0 | 9 0 | 9 9 | 4,300 |
| New York, | 9 | 62,000 | 55 0 | 32 0 | 41 1 | 10 6 | 9 0 | 9 4 | 6,900 |
| Pennsylvania, | 21 | 66,790 | 53 0 | 28 0 | 35 2 | 10 0 | 7 0 | 8 10 | 3,200 |
| Maryland, | 13 | 58,100 | 50 0 | 29 0 | 39 6 | 11 0 | 7 6 | 8 11 | 4,500 |
| Virginia, | 23 | 64,625 | 47 0 | 25 0 | 34 9 | 13 0 | 8 0 | 9 4 | 2,800 |
| North Carolina, | 2 | 7,200 | 50 0 | 38 0 | 44 0 | 10 0 | 9 4 | 9 8 | 3,600 |
| Georgia, | 2 | 8,600 | 60 0 | 41 0 | 50 6 | 10 0 | 8 0 | 9 0 | 4,300 |
| Alabama, | 10 | 91,700 | 62 0 | 45 0 | 54 0 | 12 0 | 8 8 | 11 3 | 9,200 |
| Texas, | 2 | 17,425 | 55 0 | 55 0 | 55 0 | 9 6 | 8 6 | 9 0 | 8,700 |
| West Virginia, | 3 | 9,620 | 42 0 | 32 0 | 38 0 | 11 10 | 8 0 | 9 7 | 3,200 |
| Kentucky, | 3 | 12,000 | 48 6 | 32 0 | 47 10 | 10 6 | 10 0 | 10 2 | 4,000 |
| Tennessee, | 8 | 62,000 | 65 0 | 32 0 | 44 3 | 12 0 | 8 0 | 10 0 | 7,800 |
| Ohio, | 17 | 72,100 | 41 6 | 32 0 | 35 11 | 11 6 | 8 6 | 10 4 | 4,200 |
| Missouri, | 4 | 57 000 | 60 0 | 50 0 | 55 0 | 11 0 | 10 0 | 10 9 | 14,300 |
| Michigan, | 25 | 362,275 | 56 0 | 49 0 | 48 6 | 11 4 | 8 0 | 9 11 | 14,500 |
| Wisconsin, | 11 | 99,500 | 55 0 | 30 0 | 43 9 | 11 0 | 8 0 | 9 5 | 9,000 |
| Minnesota, | 1 | 10,000 | . . . . | . . . . | 45 0 | . . . . | . . . . | 10 0 | 10,000 |
| California, | 1 | 12,000 | . . . . | . . . . | 45 0 | . . . . | . . . . | 10 0 | 12,000 |
| Oregon, | 1 | 8,000 | . . . . | . . . . | 42 0 | . . . . | . . . . | 10 0 | 8,000 |
| Washington Territory, | 1 | 10,000 | . . . . | . . . . | 50 0 | . . . . | . . . . | 10 0 | 10,000 |
| Total for the United States, | 171 | 1,149,435 | 65 0 | 25 0 | 41 1 | 13 0 | 7 0 | 9 7 | 6,800 |

## Resume for All Kinds of Fuel.

| States and Districts. | Number of stacks. | Reported annual capacity. Net tons. | Dimensions of Furnaces. Height. Maximum. | Height. Minimum. | Diameter at bosh. Maximum. | Diameter at bosh. Minimum. | Average capacity per furnace, net tons. |
|---|---|---|---|---|---|---|---|
| | | | Ft. In. | Ft. In. | Ft. In. | Ft. In. | |
| Pennsylvania, | 242 | 4,651,962 | 85 0 | 28 0 | 22 0 | 7 0 | 19,223 |
| Other states, | 337 | 5,463,645 | 86 0 | 25 0 | 21 0 | 7 0 | 16,213 |
| United States, | 579 | 10,115,607 | 86 0 | 25 0 | 22 0 | 7 0 | 17,471 |

The above data are presented to indicate the relative positions of Pennsylvania and other states at the dates named, such position altering with each year; and comparisons of the tables for the years 1885 and 1887 show a decided increase in the number of furnaces, and increase in capacity in each class, and in these changes Pennsylvania holds a prominent position. However, it is not considered necessary to work up each state in detail for the present and only the figures for the State of Pennsylvania as reported in the latest edition of the Iron and Steel Works Directory (1894), are presented below:

*Resume for Furnaces Using All Kinds of Fuel in Pennsylvania, January 1st, 1894.*

(*Proportions of Blast Furnaces—1894.*)

| Districts. | Number of stacks. | Reported annual Gross capacity. tons. | Dimensions of Furnaces. Height. Maximum. | Height. Minimum. | Height. Average. | Diameter at bosh. Maximum. | Diameter at bosh. Minimum. | Diameter at bosh. Average. | Average capacity per furnace, gross tons. |
|---|---|---|---|---|---|---|---|---|---|
| | | | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft. In. | Ft. In. | |
| Lehigh Valley, | 43 | 893,725 | 81 0 | 33 0 | 63 8 | 19 0 | 8 6 | 16 0 | 20,784 |
| Schuylkill Valley, | 28 | 739,200 | 80 0 | 50 0 | 63 9 | 18 0 | 12 0 | 15 0 | 26,400 |
| Upper Susquehanna, | 14 | 309,000 | 75 0 | 36 0 | 58 8 | 20 0 | 12 0 | 15 6 | 22,071 |
| Lower Susquehanna, | 28 | 733,400 | 80 0 | 30 0 | 62 7 | 20 0 | 8 6 | 14 5 | 26,193 |
| Juniata Valley, | 13 | 258,700 | 75 0 | 49 6 | 63 7 | 18 0 | 9 0 | 14 8 | 19,900 |
| Allegheny county, | 26 | 2,209,500 | 90 0 | 65 0 | 80 1 | 23 0 | 14 0 | 19 0 | 84,981 |
| Shenango Valley, | 22 | 928,000 | 80 0 | 60 0 | 68 10 | 18 0 | 12 0 | 14 10 | 42,182 |
| Miscellaneous, | 11 | 521,500 | 78 0 | 65 0 | 74 2 | 19 0 | 14 6 | 17 0 | 47,409 |
| Charcoal, | 14 | 49,450 | 60 0 | 29 0 | 39 3 | 10 0 | 7 9 | 8 6 | 3,532 |
| Total, | 199 | 6,642,475 | 90 0 | 29 0 | 65 3 | 23 0 | 7 9 | 15 4 | 33,379 |

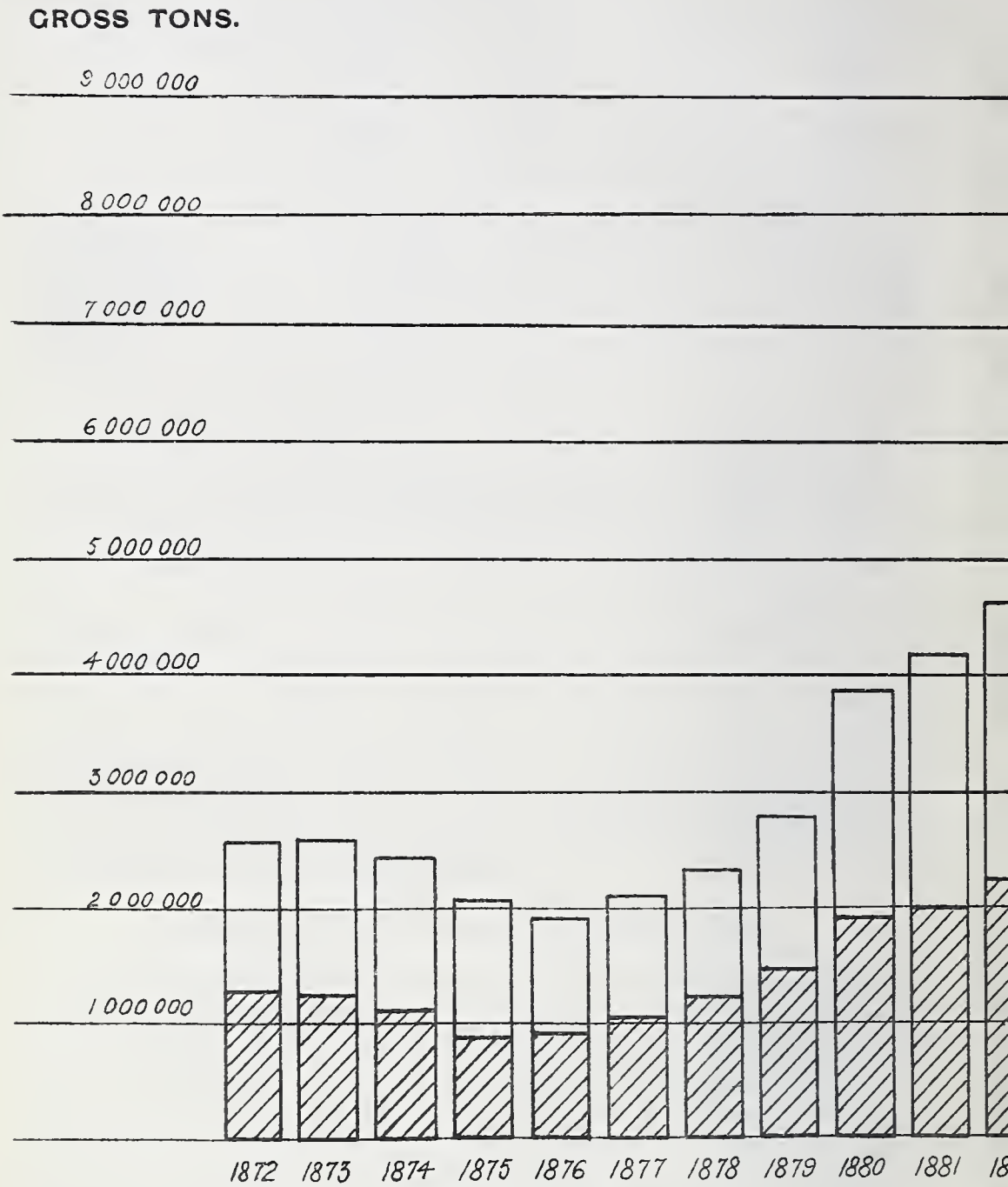
A study of the foregoing tables will suggest facts of interest concerning the development of the pig iron industry in various sections, but attention is invited to the following, marked decrease in the number of blast furnaces, Pennsylvania, showing 269 furnaces in 1885, 242 in 1886 and 199 in 1894; the general increase in average height and average bosh diameter indicating that the smaller furnaces were abandoned and that new structures were of larger dimensions. This and the advanced practice is indicated by the average reported annual capacities per blast furnace in Pennsylvania, viz: 15,545 tons in 1885, 19,223 tons in 1887 and 33,379 tons in 1894. The reported capacities are not the output, but in most cases correspond with results which have been attained at various blast furnaces.

## NUMBER OF FURNACES AND PRODUCTION.

The first diagram shows, by means of vertical columns, the production of pig iron in the United States (the shaded portion being the proportion produced by the State of Pennsylvania) for each year from 1872 to 1894 inclusive. From this it will be seen that while, as a rule, the total output of the State of Pennsylvania rose and fell as the aggregate for the United States increased or diminished, the amount of increase or decline was not always proportionate to that for the whole country, and in some instances, as in 1876 and 1883, Pennsylvania showed an increased production while the total for the United States declined.

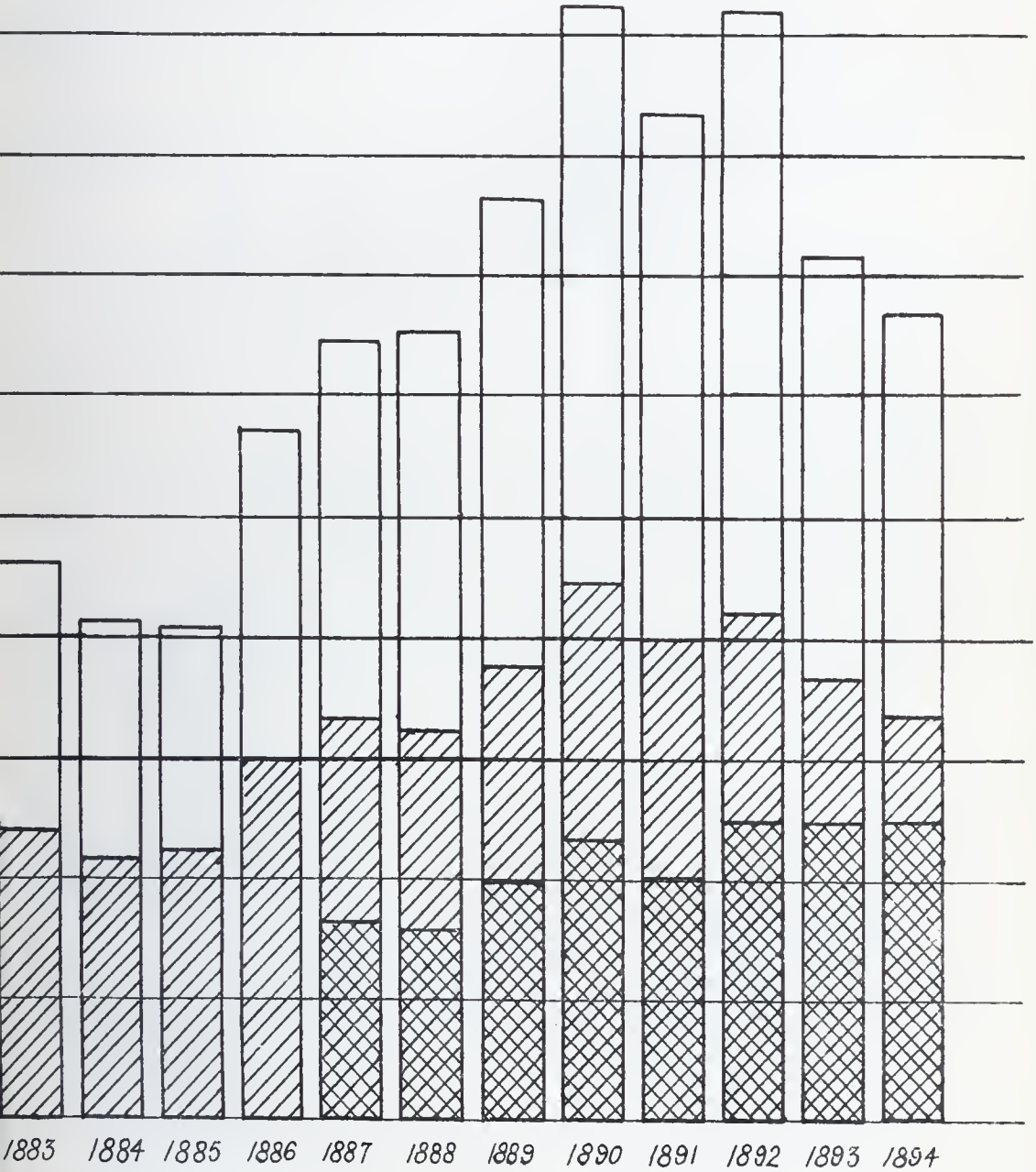
The second diagram represents the relative production of pig iron in the State of Pennsylvania with different fuels for the years 1872 to

## RELATIVE PRODUCTION OF PIG IRON IN THE UNI

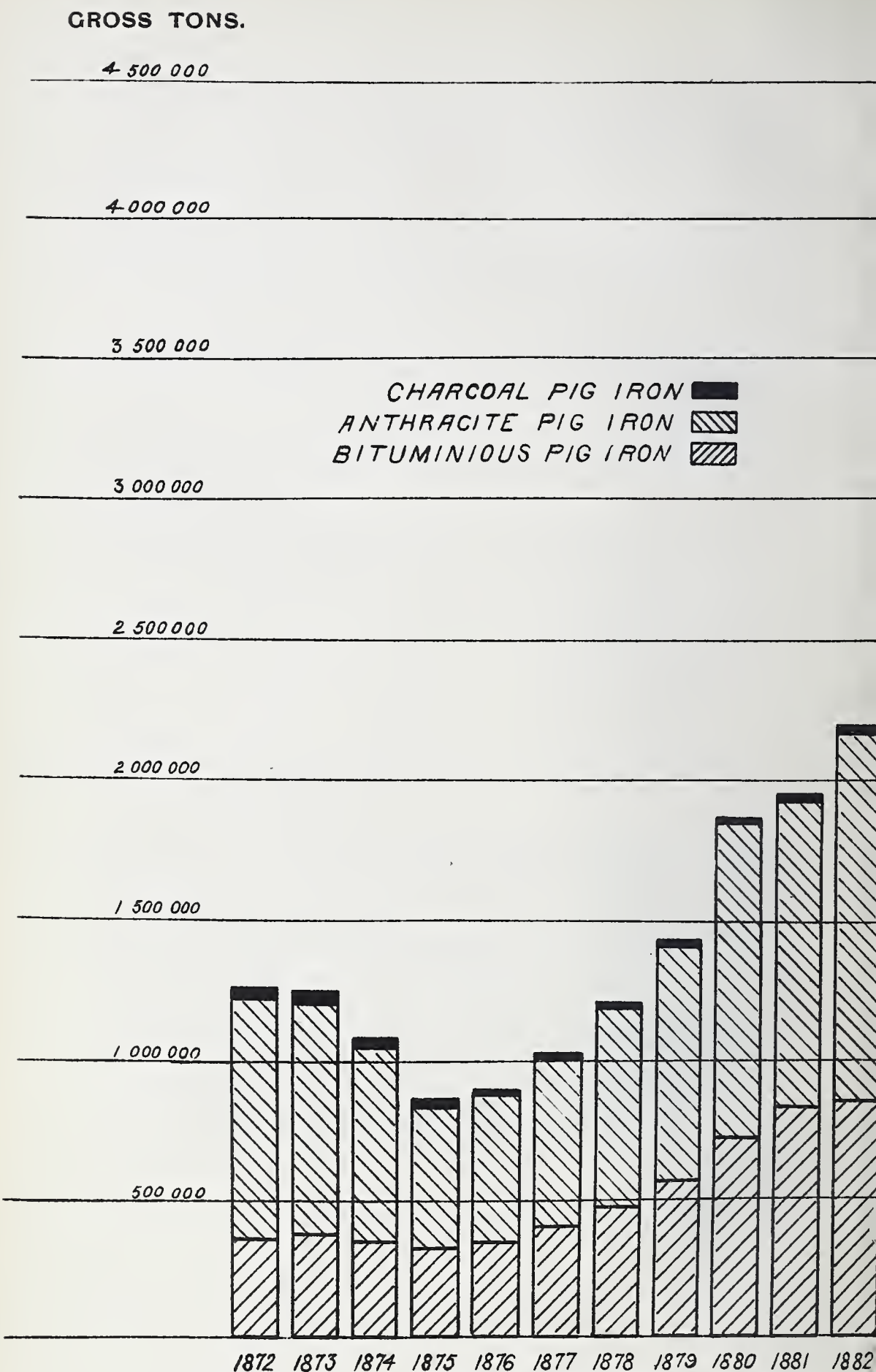



Output of the United States shown by total height of colu
Bessemer pig iron by double cross-section lines.

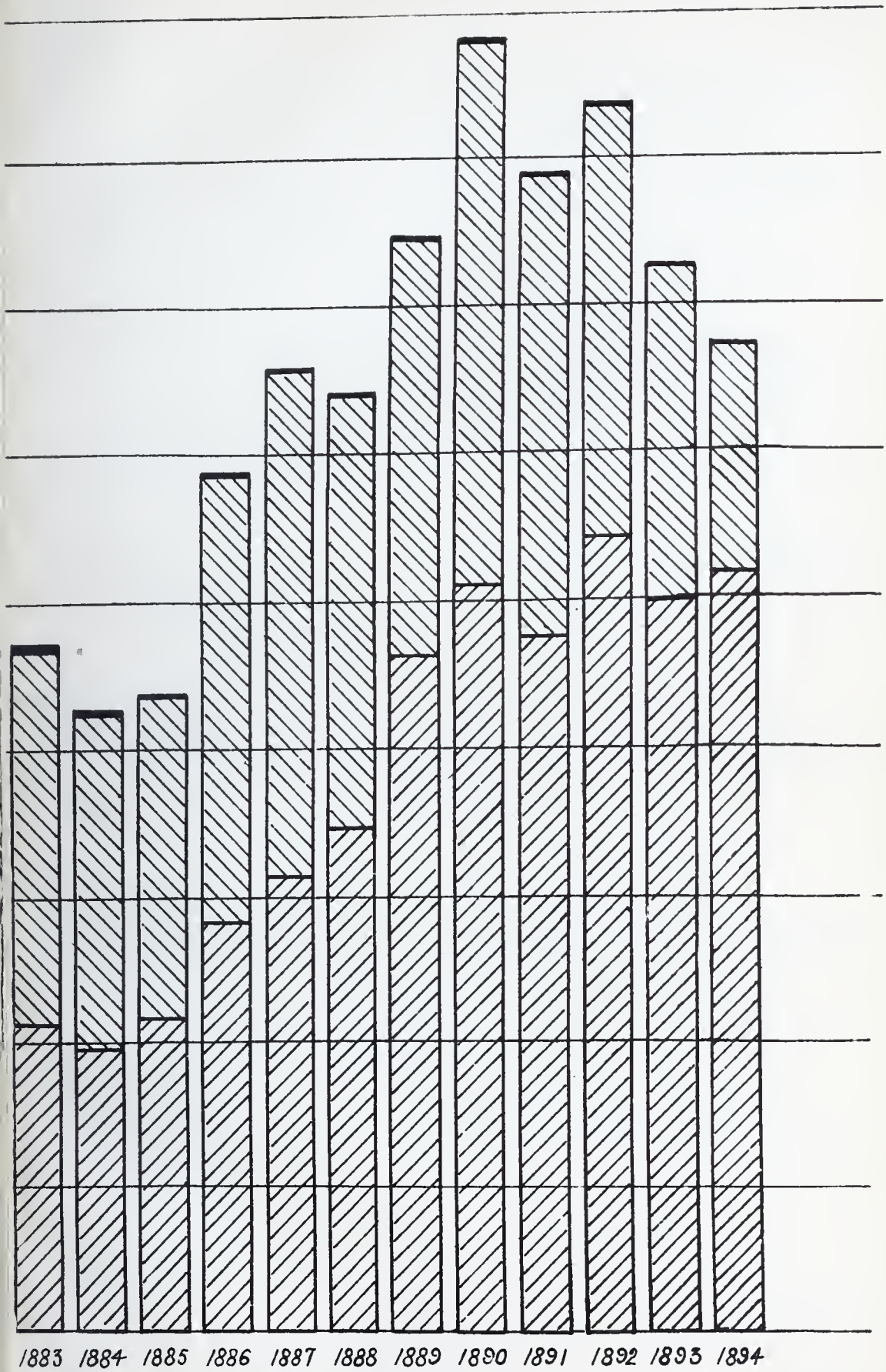
STATES AND IN PENNSYLVANIA. 1872 to 1894.



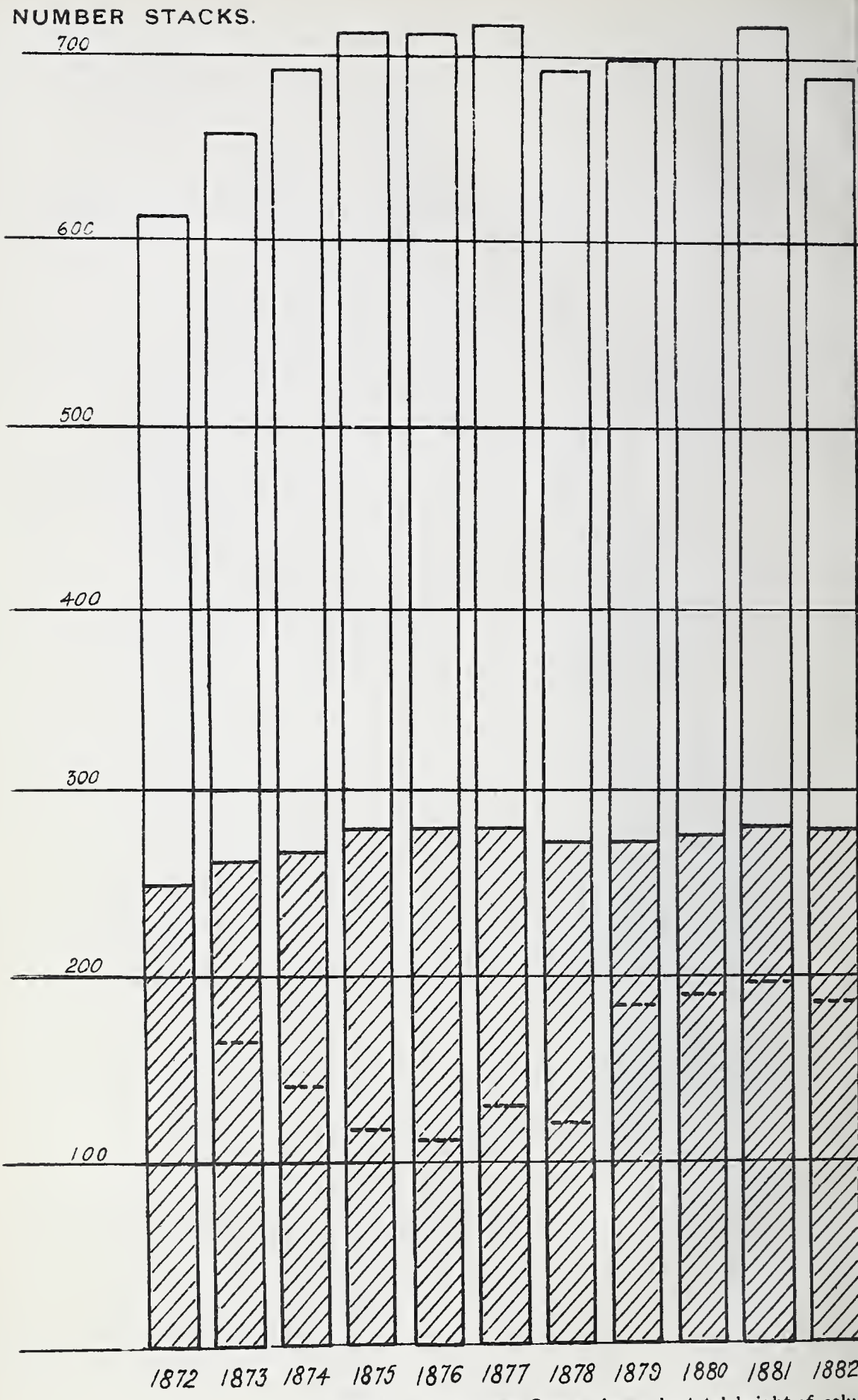

and output of Pennsylvania by sectioned portions of columns, and of



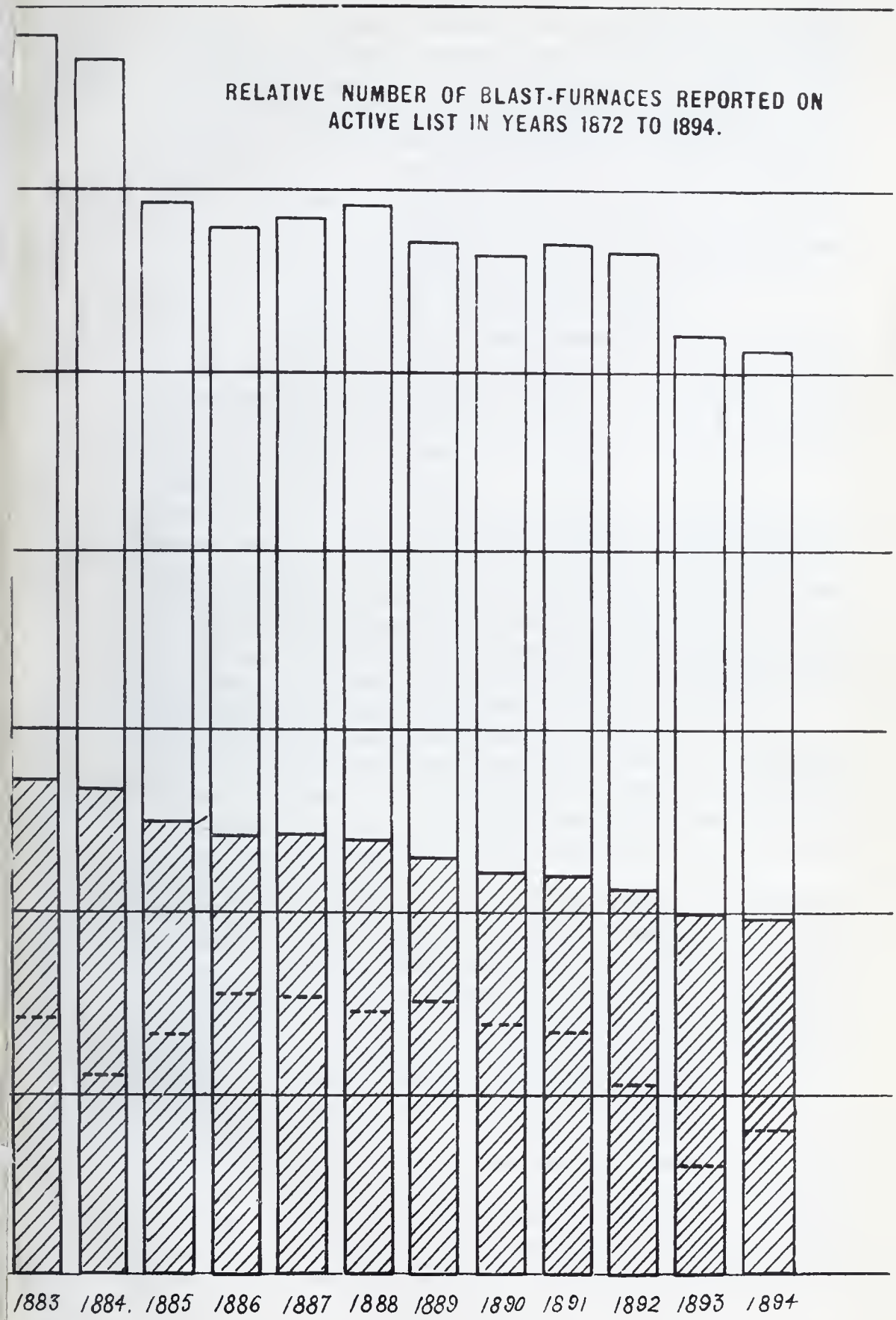

RELATIVE PRODUCTION OF PIG IRON IN P




INSYLVANIA WITH DIFFERENT FUELS. 1872 to 1894.




Number in the United States shown by total height of colu
in blast at close of each year in Pennsylvania is indicated by d




n; number in Pennsylvania by shaded portion of column; and number
ted lines.

1894, inclusive. In order to represent the small amount of charcoal pig iron produced it was necessary to draw this diagram on a larger scale than that of the first diagram which gave the output for the United States and Pennsylvania. In this graphic representation the height of the column represents the total production in the State, the black portion at the top showing the proportion of charcoal pig iron made, the middle section being the amount of anthracite pig iron and the base the quantity of bituminous pig iron produced in each year.

The production of charcoal pig iron has shown a marked decrease, the output for the year 1894, viz, 4,544 gross tons being about one-tenth of the production in the maximum year 1881.

In 1872 the major portion of Pennsylvania's pig iron was made with anthracite coal or mixed anthracite and coke, and while the total produced with this character of fuel was slightly less in 1894 than in 1872 the percentage of the total shows a great falling off. The maximum output with this fuel was in 1890, when approximately 1,800,000 gross tons were made.

The production of pig iron in Pennsylvania with bituminous coal or coke is now in excess of that produced with charcoal, anthracite and mixed anthracite and coke, but the annual amount of iron made with this fuel did not reach one-half million tons until 1879; since then, however, its advance has been rapid and in 1894 over two and a half million tons of pig iron were made with coke as fuel, or nearly three-quarters of the total output of the State. The maximum make was, in 1892, when 2,700,000 tons was the aggregate produced by the coke and bituminous coal blast furnaces.

The diagram will also illustrate the rapid growth of Pennsylvania as an iron producing State, from less than one million tons in 1875 and 1876 to nearly four and a half million tons in 1890, since which year there has been a falling off, the 1894 output being but three and a third million gross tons.

The third diagram shows by the relative heights of columns the total number of blast furnaces in the United States at the close of each year, that portion which is shaded representing the proportionate number in Pennsylvania, which are considered as being active or likely to resume operations. The dotted lines show the number of furnaces which were in blast in Pennsylvania at the end of each year. This does not, however, represent the total number in blast during a part of the year, which, in most cases, is much larger.

In planning the above the number of blast furnaces in the United States and in Pennsylvania and the number in the latter which were reported as active, are, as in all other cases in this paper, taken from the reports, directories and statements of the American Iron and Steel Association, but in computing the number of blast furnaces which should or should not be considered as active there are

conditions which may place an iron works temporarily in one or the other category. New furnaces in the course of erection, but incomplete, increase the number beyond that reported, but the tenacity with which proprietors and managers hold to expectations of reviving the industry at a certain location, generally swells the number of furnaces which are carried on the active list above that which would represent the plants which, even under favorable conditions of trade, could be operated to advantage. The diagram may be considered as fairly representing the relative number of furnaces in Pennsylvania and the United States, for any decrease in the number would at present be approximately proportionate for the country at large or for the State.

A fact which will impress one who examines the third diagram in connection with the first and second diagrams is that while the number of furnaces in the United States and in Pennsylvania has decreased, the annual output of the remainder has increased, and that while Pennsylvania produces one-half the total output of the United States, she has not one-half the reported active furnaces within her borders, the figures at the close of 1894 showing that out of a total of 511 furnaces producing 6,657,388 tons, Pennsylvania had but 196 stacks which in the aggregate showed an output of 3,370,152 gross tons.

This difference in tonnage per furnace is due in part to difference in size of stacks, to generally superior management, advantageous location for securing desirable raw materials and to a good market for the product of the furnaces.

The largest number of furnaces in the United States in any one year which were considered on the active list, was in 1877 and 1881, when 716 were thus reported; while for Pennsylvania 1876, with a total of 279 furnaces, was the banner year, the minima for both the United States and Pennsylvania was, in 1894, when the totals were respectively 511 and 196.

It is difficult to determine which of the blast furnace plants of the country should or should not be considered as upon the active list. A number may not have been in operation for years, but may be reported as active, some of which will scarcely be put in blast again, and others are handicapped so that they can only operate in times of abnormal profits; in fact, so many considerations affect the various plants that it is impossible to determine the exact number. Estimating the number of plants which should be stricken from the list, the secretary of the American Iron and Steel Association said, concerning former directories, "many stacks were included which had not been in blast for a long time, and others which could not be operated except during short periods of exceedingly high prices for pig iron. We have gone over this list very carefully and have eliminated a number of furnaces. While most of the furnaces thus dropped have

been abandoned, we omit some which were not likely to be operated again unless prices rise very high and stay high for a time, and even then the majority of them will be found unfit for use without being refitted and practically rebuilt."

The difference between the reported capacities and the output of blast furnaces is often misunderstood by those who discuss iron statistics and the relation between the total number of furnaces and the number in blast seems to be but imperfectly appreciated.

At no time from 1873 to 1885 has over 63.7 per cent. of all the furnaces in the country been reported as in blast at any one date and the proportion of active furnaces has been as low as 30 per cent. of the whole.

The largest percentage of active furnaces of any class returned was 82.1 as shown by the record of anthracite furnaces in April, 1880, and the least proportion of anthracite furnaces in blast was 31.1 per cent. in September, 1876.

The bituminous furnaces show less variation than those using anthracite fuel, the maximum active percentage of the bituminous furnaces being 70.7 per cent. in April, 1881, and the minimum 36.3 per cent. in September.

The returns for December 31, 1873, show 67.1 per cent. of the charcoal furnaces in operation, and those for April, 1877, exhibit but 20.2 per cent. in blast.

In other words, in the past twenty years there have at no time been two-thirds of all the blast furnaces in the country in operation.

There are always a considerable number of blast furnaces being repaired or rebuilt; scaffolds, fires, chills, explosions, bad management, scarcity of fuel or ores, financial troubles, strikes and other causes are constantly occurring to withdraw furnaces from the active list, so that it is doubtful if, under favorable circumstances, the country could produce 75 per cent. of the total reported blast furnace capacity in any year. Statistics show that the average activity is scarcely 50 per cent. of the total number of blast furnaces.

## PRODUCTION OF BESSEMER PIG IRON.

The different grades or qualities of pig iron made in the United States or in Pennsylvania are not reported separately, except where the character of metal produced is specially adaptable for the production of steel by the Bessemer pneumatic processes. Although other elements influence the value of pig iron for use in the Bessemer converter, phosphorus is the principal ingredient controlling the standard, and any pig iron which carries one part or more of phosphorus to one thousand parts of iron is outside of the Bessemer limit, while in many cases the requirements are within a narrower margin.

To the introduction of the Bessemer and open hearth steel processes much of the rapid augmentation of our consumption of pig iron in late years is unquestionably due. In 25 years the steel manufacture of the country has grown from an annual output of 5,000 net tons of over 4,000,000 net tons in 1891.

The production of Bessemer pig iron has not been separately reported except for 1887 and subsequent years, and to indicate the position which Pennsylvania occupies as a purveyor of material from which to produce steel, the relative quantities of Bessemer pig iron made in Pennsylvania each year are indicated on the first diagram by double cross sectioning.

In this connection it may be interesting to note that the total quantity of all kinds of pig iron made in Pennsylvania was greater than the total output of Bessemer pig iron in the United States, except in 1892 and 1894.

During the eight years that the Bessemer pig has been separately reported the United States has made 28,050,484 gross tons, of which Pennsylvania contributed 17,005,404 gross tons, equivalent to 60.62 per cent. of the total, its smallest percentage was 56.02 per cent. in 1892, and the largest 65.49 in 1894.

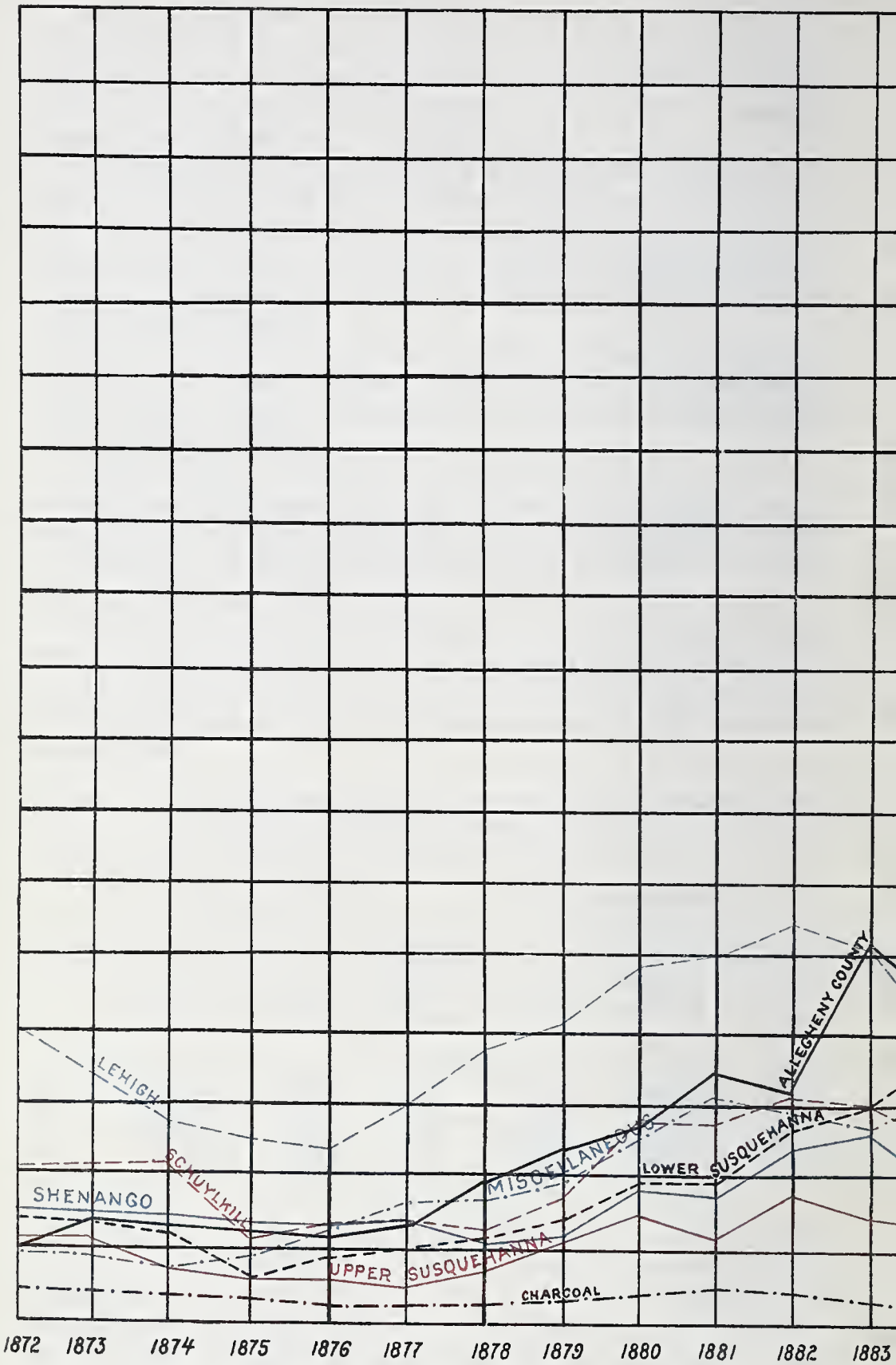
The following statement will indicate the total production of pig iron and of Bessemer pig in the United States and in Pennsylvania, as well as the proportions of the total output of Pennsylvania and of the United States, which were of Bessemer grade in 1887 and subsequent years:

*Relative Production of Bessemer Pig Iron to the Total Outputs of the United States and of Pennsylvania.*

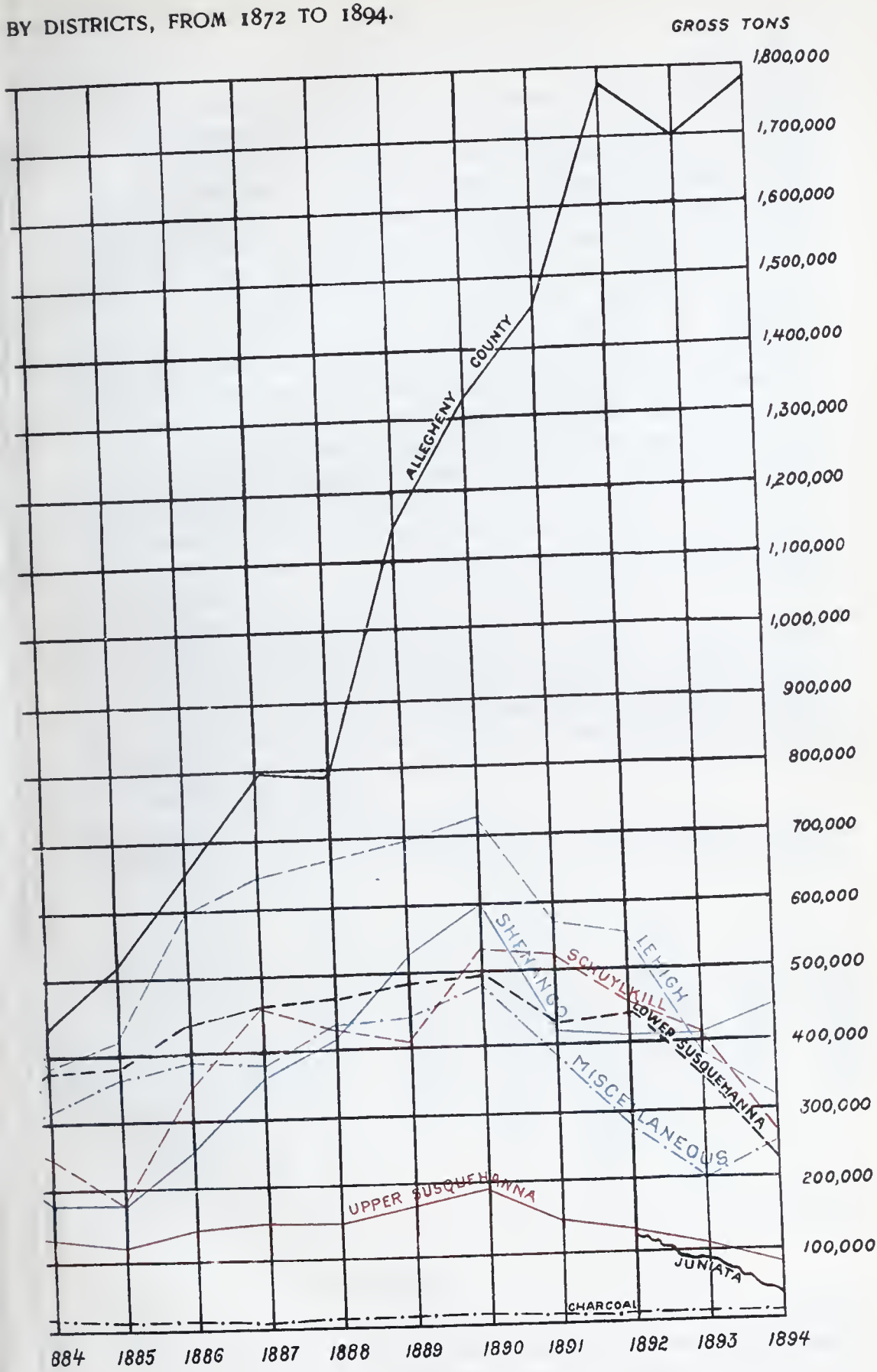
| Years. | Production of United States. | | | Production of Pennsylvania. | | |
|---|---|---|---|---|---|---|
| | Total pig iron. Gross tons. | Bessemer pig iron. Gross tons. | Proportion of total which was of Bessemer grade. | Total pig iron. Gross tons. | Bessemer pig iron. Gross tons. | Proportion of total which was of Bessemer grade. |
| 1887, . . . | 6,417,148 | 2,875,462 | 44.81 | 3,289,837 | 1,645,044 | 50.00 |
| 1888, . . . | 6,489,738 | 2,637,859 | 40.65 | 3,204,630 | 1,580,843 | 49.33 |
| 1889, . . . | 7,603,642 | 3,151,414 | 41.45 | 3,733,252 | 1,979,418 | 53.02 |
| 1890, . . . | 9,202,703 | 4,092,343 | 44.47 | 4,415,329 | 2,355,236 | 53.34 |
| 1891, . . . | 8,279,870 | 3,472,190 | 41.94 | 3,952,387 | 2,077,805 | 52.57 |
| 1892, . . . | 9,157,000 | 4,444,041 | 48.53 | 4,193,805 | 2,489,730 | 59.37 |
| 1893, . . . | 7,124,502 | 3,568,598 | 50.09 | 3,643,022 | 2,383,230 | 65.42 |
| 1894, . . . | 6,657,388 | 3,808,567 | 57.21 | 3,370,152 | 2,494,098 | 74.01 |

From the above table it will be seen that the proportion of Bessemer pig iron to total pig iron remained approximately the same from 1887 to 1891 inclusive, both in the United States and in Pennsylvania, the proportion in this State being slightly higher, but the total amount produced increased as the country's pig iron pro-

PIG IRON PRODUCTION OF PENNSYLVA



BY DISTRICTS, FROM 1872 TO 1894.



duct augmented. Since 1891 there has been a growth in the proportion of Bessemer pig iron, both in Pennsylvania and in the United States, until 1894, when 74.01 per cent. of pig iron made in the State, and 57.21 per cent. in the nation, were of Bessemer grade. In the United States this was not due to a greater output of Bessemer pig iron, but to the fact that while slightly more of this grade was made in 1894 the production of mill and foundry iron fell off nearly one-half million tons. While the total make of pig iron in Pennsylvania showed a decline in 1894, the output of Bessemer pig iron increased and reached its maximum of 2,494,098 gross tons. The larger portion of this increase was in the Allegheny county district, where about three-fifths of the total were produced (1,530,835 gross tons) and this county also reached its maximum output of all kinds of pig iron in 1894, viz, 1,782,079 gross tons. Of the remainder the Shenango Valley district produced 341,515 gross tons, the Lower Susquehanna valley, 225,186 gross tons; the Upper Susquehanna valley, 86,801 gross tons; the Lehigh valley, 77,037 gross tons, the Schuylkill Valley 50,688 gross tons, and the miscellaneous furnaces 182,036 gross tons.

To show Pennsylvania's position with other states producing Bessemer pig iron the following table has been excerpted from the annual statistical report of the American Iron and Steel Association for the year 1893, the figures for the year 1894 being added; it indicates the production of Bessemer pig iron in each state from the year 1887 to 1894 inclusive:

*Production of Bessemer Pig Iron by States from 1887 to 1892 Inclusive*

| States. | 1887. Gross tons. | 1888. Gross tons. | 1889. Gross tons. | 1890. Gross tons. | 1891. Gross tons. | 1892. Gross tons. | 1893. Gross tons. | 1894. Gross tons. |
|---|---|---|---|---|---|---|---|---|
| Pennsylvania. | 1,645,044 | 1,580,843 | 1,979,418 | 2,355,236 | 2,077,805 | 2,489,730 | 2,383,230 | 2,494,098 |
| Ohio, | 295,664 | 300,674 | 404,148 | 492,060 | 458,978 | 639,183 | 421,197 | 589,940 |
| Illinois. | 490,278 | 492,032 | 486,576 | 628,863 | 540,714 | 800,661 | 358,592 | 543,309 |
| W. Virginia, | 65,241 | 75,119 | 95,345 | 123,489 | 84,283 | 154,793 | 81,591 | 80,781 |
| Colorado, | 20,799 | 14,325 | 1,131 | 19,083 | 8,430 | 31,416 | 39,850 | 69,524 |
| New York, | 55,916 | 46,495 | 68,703 | 177,789 | 131,867 | 133,723 | 71,213 | 19,612 |
| Wisconsin, | 97,844 | 30,836 | 15,801 | 37,021 | 6,658 | 2,800 | 2,695 | 5,207 |
| Kentucky, | ..... | ..... | ..... | ..... | 1,172 | 24,357 | 15,646 | 2,895 |
| Maryland, | 16,494 | ..... | 12,927 | 128,826 | 111,468 | 88,224 | 147,166 | 2,309 |
| Missouri. | 109,576 | 68,321 | 65,933 | 62,013 | 26,632 | 44,950 | 32,360 | 892 |
| Minnesota, | ..... | ..... | ..... | ..... | 1,226 | 14,071 | 10,373 | ..... |
| N. Carolina, | ..... | ..... | ..... | 2,105 | 3,217 | 2,908 | 2,843 | ..... |
| New Jersey, | 56,940 | 24,469 | 21,432 | 64,711 | 12,964 | 17,225 | 1,842 | ..... |
| Michigan, | 11,398 | 2,678 | ..... | 1,147 | 4,544 | ..... | ..... | ..... |
| Tennessee, | 10,268 | 2,067 | ..... | ..... | ..... | ..... | ..... | ..... |
| Texas, | ..... | ..... | ..... | ..... | 1,607 | ..... | ..... | ..... |
| Alabama. | ..... | ..... | ..... | ..... | 625 | ..... | ..... | ..... |
| Total, | 2,875,462 | 2,637,859 | 3,151,414 | 4,092,343 | 3,472,190 | 4,444,041 | 3,568,598 | 3,808,567 |

## PIG IRON PRODUCTION BY DISTRICTS.

The accompanying chart shows the amount of pig iron produced by the different districts of Pennsylvania and illustrates graphically the various vicissitudes of the iron trade in these districts in each

year from 1872 to 1894 inclusive. The division adopted in this representation is that used by the American Iron and Steel Association in collecting and reporting statistics. The areas embraced in each being mentioned below. The record of the output of charcoal iron is not reported by districts nor is the quantity of this class of pig iron included in the production of the districts in which charcoal blast furnaces are located, the figures of the output of charcoal iron being in each year the production of the State.

*The Lehigh Valley.*

Taking the districts in order, the Lehigh valley, in 1872, ranked first comprising blast furnaces located in Northampton, Lehigh, Bucks and Carbon counties, using anthracite or anthracite and coke mixed as fuel. This district which, in 1872, produced about 400,000 tons of pig iron showed a decreased output until 1876, then increased to nearly 550,000 tons in 1882, reaching its maximum in 1890, when over 700,000 gross tons were made, but owing to the growing competition from the west, longer haul for Lake Superior ores, the financial condition of some of the companies, and the failure in some instances to keep abreast of the times in the matter of equipment, the district held but fourth position in 1893, and sixth place in 1894.

The furnaces now on the active list which are included in the Lehigh valley district are with but few exceptions located on the banks of the Lehigh river, the exceptions being but a few miles removed. The 1894 Directory of the American Iron and Steel Association credits to this district forty-three blast furnaces completed and one partly erected. In this list are included the furnaces of the Thomas Iron Company of eleven stacks (composed of one plant of six stacks, two of two furnaces each and one single stack), the Bethlehem Iron Company of seven stacks (consisting of one plant of five stacks and two single furnaces); the Glendon Iron Company of four stacks, the Crane iron works of four stacks; also six groups of two stacks each and five individual furnaces, among the latter being the Durham iron works referred to in this article. Bethlehem and Allentown are prominent cities in this district.

*The Schuylkill Valley.*

The Schuylkill valley includes furnaces in Berks, Montgomery, Delaware, Chester, Schuylkill and a portion of Lebanon counties. While this district has had its ups and downs it held the same relative position in 1893 as in 1872 as a producer, viz, second, due principally to the improving and modernizing of some of the furnace plants, increasing their output and permitting of operation where, if the improvements had not been consummated, the furnaces would have been compelled to cease operation. Its greatest output was in

1890, when nearly 550,000 gross tons were made. In 1894, however, it held third place.

The blast furnaces in the Schuylkill valley use anthracite, or anthracite and coke mixed, and coke as fuels, and are grouped in plants of a smaller number of stacks; in addition, a greater portion are removed from the banks of the Schuylkill river than is the case in the Lehigh valley district, one of them being on the Delaware river near Chester. This district contains twenty-eight furnaces, including one plant of four stacks, two of three stacks and four furnaces of two stacks each and ten single stacks. This is the district in which iron was first made in Pennsylvania, and among others there still active are the Warwick, Pioneer and Robesonia furnaces, names which were mentioned as among the pioneers in iron manufacture, in the description of the growth of the iron industry of Pennsylvania in the earlier portion of the article. Prominent among other existing furnaces are the plants of the Reading iron works and the Henry Clay furnaces at Reading, the Keystone furnaces at Birdsboro and the Sheridan furnaces at Sheridan. The principal cities and towns in this district the Philadelphia, Chester, Norristown, Phoenixville, Pottstown, Reading and Pottsville.

### *The Shenango Valley.*

The Shenango valley, which occupied third place in 1872, held the same position in 1893, but ranked second in 1894. The district includes furnaces located in Lawrence and Mercer counties, using coke as fuel, but the industry was established upon the use of the raw bituminous local coal. The furnaces are usually of large size, convenient to an unlimited fuel supply of good quality and better situated as regards a supply of Lake Superior iron ore than any of the other districts of the State. It has risen from a product of about 150,000 gross tons in 1872 to over 450,000 tons in 1894, its maximum being nearly 600,000 tons in 1890. The Shenango district is practically all of Pennsylvania north and west of Pittsburgh, and forms with the Mahoning district of Eastern Ohio, an important iron producing and manufacturing center. The twenty-two blast furnaces in this district are (with the exception of one plant of three stacks) either single furnaces or pairs of furnaces, grouped about the towns of Sharon, Sharpsville and Newcastle. Among the prominent plants are those of the Wheeler Furnace Company, the Mabel furnaces, Spearman furnace, Raney & Berger Iron Company, etc.

### *The Lower Susquehanna Valley.*

In 1872 the Lower Susquehanna valley was fourth in rank, and in 1893 and 1894 it occupied fifth position. Its furnaces are located in Lebanon, Lancaster, Cumberland, York and Dauphin counties. The

district produced not quite 150,000 tons in 1872, declined to less than 100,000 tons in 1875, since which time it steadily increased until 1890, when the maximum of 500,000 tons was reached, falling in 1894 to but about 233,000 gross tons. The furnaces use coke or anthracite and coke mixed as fuel. The plants in this district, especially those in Lebanon county, are located close to the immense deposit of magnetite at Cornwall, and the cheapness with which this ore is won has been the main cause of the increased production. The furnaces in Dauphin county use considerable foreign ore, and the pig iron made is mostly for use in the production of Bessemer steel, a large plant being located at Harrisburg.

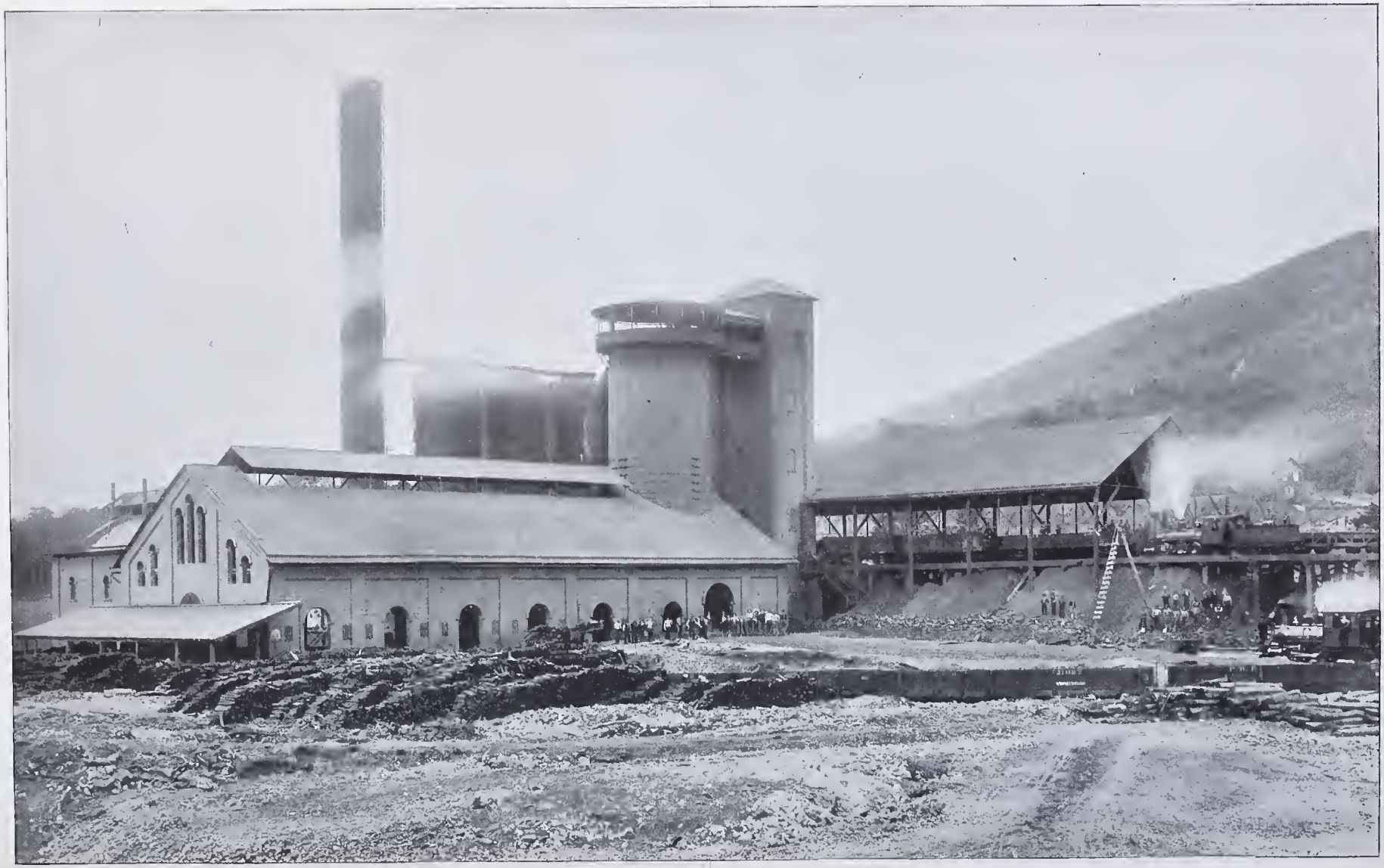
There are in this district seventeen plants, nine of one stack each, six of two stacks, one of three stacks and one of four stacks, a total of twenty-eight stacks. The plant of four stacks is connected with the large industry of the Pennsylvania Steel Company, at Steelton, close to Harrisburg. The Lackawanna Iron and Steel Company also own four stacks, but they are in two plants of two each, one located at Cornwall and the other at Lebanon. There are five stacks in three plants at Lebanon, and seven are similarly situated close to the Cornwall ore hills, there being also a charcoal furnace at the latter place. Thirteen of the furnaces are on the Susquehanna river, most of the others being some distance from the stream. The principal cities are Harrisburg, Lebanon, Lancaster, Columbia and Wrightsville. The Chickies furnace (see page 50) and the Colebrook furnace illustrated on page 62 are in this district.

### *The Upper Susquehanna Valley.*

The Upper Susquehanna valley, with its blast furnaces in Lackawanna, Columbia, Montour and Perry counties was fifth in 1872 in rank and seventh in 1893 and 1894. It has never reached a product of 200,000 gross tons, the maximum being in 1890 when it closely approximated that figure. Were it not for the five furnaces in Lackawanna county at Scranton, connected with the steel works of the Lackawanna Iron and Steel Company, where the fuel, principally anthracite coal, is cheap and satisfactory and a home market is found, this district would show a considerable decline, as a number of the remaining furnaces in other counties are inactive. Of the fourteen furnaces in the Upper Susquehanna district there are three single stacks and three pairs of stacks, in addition to the five stacks at Scranton. The more important cities and towns in this district are Scranton, Wilkes-Barre, Danville, Bloomsburg and Duncannon.

### *Allegheny County.*

Allegheny county has the unique distinction of producing the largest amount of pig iron at present of any district in



EVERETT FURNACE, EVERETT.

the State or in the United States, having risen to its present rank from a production of but 100,000 tons in 1872, when it occupied seventh place. The larger steel companies own and operate furnaces, the magnificent fuel supply (Connellsville coke) close at hand, the good railroad facilities for assembling raw materials and conveying away finished product, the approved appliances, good management, and a splendid market, all contributing to the success of this county which, in 1894, reached its maximum of neary 1,800,000 gross tons of pig iron. Even at the present time when the stagnation in this industry has been great, the furnaces in this county have been in blast, all of which depend entirely upon coke for fuel, and Lake Superior ores form the principal material smelted. The intimate connection with the steel industry is exhibited by the fact that in the past five years out of a total of 8,052,147 gross tons of pig iron made in Allegheny county, 6,180,325 gross tons, or 76.7 per cent. was of Bessemer grade.

There are at present twenty-six blast furnaces in Allegheny county divided into ten plants. The Carnegie Steel Company operate eleven stacks in two plants. One of these, the Edgar Thomson plant, with nine stacks, is illustrated on page 106. There are also two plants of three stacks, three plants of two stacks each and three single stacks. All of these twenty-six furnaces are either in Pittsburgh or within fifteen miles of that city. These blast furnaces are nearly all of great size, with ample appliances for making large outputs. In addition to the furnaces of the Carnegie Steel Company, are those of the Isabella Furnace Company, Laughlin & Company, Shoenberger, Speer & Company, Monongahela Furnace Company and others. The principal cities are Pittsburgh, Allegheny City and McKeesport.

### *The Juniata Valley.*

The Juniata valley comprises furnaces in Centre, Blair, Mifflin, Perry, Bedford and Huntingdon counties, of which statistics have been collected separately for but three years, 1892, 1893 and 1894, those for previous years having been included in the reports for the miscellaneous furnaces and Upper Susquehanna district, and this change has decreased the reported outputs of these latter divisions for the years mentioned. The amount of pig iron made is small, being but about 100,000 gross tons, and in 1894 but 41,000 tons. Coke is used as fuel.

The thirteen stacks cited to this district are located near Bellefonte, Hollidaysburg, Everett, Riddlesburg, Saxton, Mt. Union, Lewistown and Newport, there being three plants of twin furnaces and seven single stacks. These furnaces were constructed to use local ores but some which have been lately operating supplemented their supply by ores from the Lake Superior region.

### *Miscellaneous Coke Furnaces.*

The remaining blast furnaces with the exception of those using charcoal as fuel, comprise the miscellaneous division, with stacks in Cambria, Westmoreland, Fayette, Armstrong and Cameron counties, coke being depended on as fuel. The greatest output of these furnaces was in 1890, when nearly 500,000 gross tons represented the total, in 1893, it occupied sixth position, producing about 200,000 tons, but in 1894 the output was 265,000 gross tons, giving it fourth place.

The most important of the five plants in this district is that of the Cambria Iron Company, at Johnstown, where six furnaces are operated in connection with the steel works. The remaining five stacks are in single plants except at Dunbar, in the Connellsville coke region, where there are two stacks. The eleven stacks of this district rely principally upon Lake Superior ores which are smelted with coke. In this district was situated the Alliance iron works, mentioned in the historical portion of this article.

### *The Charcoal Furnaces.*

All of the charcoal furnaces of the State which are on the active list are put under one head, "charcoal," although they are located in Union, Cumberland, Adams, Franklin, Lebanon, Centre, Huntingdon, Chester, Schuylkill and Berks counties. The principal difficulty of operating these furnaces has been their small size, the lack of a sufficient supply of charcoal at low rates and of modern appliances. Their combined output has never reached 50,000 gross tons, the nearest approach to that figure being in 1881. Of late years the production has been greatly diminished, the total for 1894 being but 4,544 gross tons.

If divided according to districts as above, out of the fourteen charcoal furnaces now reported on the active list, there are four each in the Schuylkill, Juniata and Upper Susquehanna districts, the remaining two belong to the miscellaneous division. Quite a number of these stacks either occupy the same site, or are remodelled from the older charcoal furnaces before described, and the names of Pine Grove, Cornwall, Isabella, Boiling Springs, etc., recall the earlier days of the industry.

## COMPARATIVE COSTS OF PRODUCING PIG IRON.

With the increased production of pig iron in the states of Alabama, Tennessee, Georgia and Virginia and the quantities of this metal which find a market in the district naturally tributary to the Pennsylvania blast furnaces, the question is raised as to the relative costs at which iron can be, or is made in the two sections. Unless

all conditions are known it is difficult to make territorial comparisons, and operators are naturally averse to divulging information concerning current expenditures; but the following which shows the actual costs of materials and labor to produce iron of nearly similar grade and chemical composition at a Southern and a Western Pennsylvania blast furnace is submitted:

*Cost of Producing Pig Iron at a Southern Furnace.*

| | |
|---|---|
| 3,004 pounds of coke, | $2.75 |
| 5,495 pounds of ore and cinder, | 2.66 |
| 934 pounds of limestone, | 0.13 |
| 9,553 pounds of raw materials, | $5.54 |
| Labor at furnace, | 81 |
| Supplies, | 37 |
| | $6.72 |

The company which operated the furnace mined its own ores, coal and flux, and coked its own coal but no royalties for ore or coal are included in the above, nor is there any allowance for repairs of coke ovens or furnaces.

*Cost of Producing Pig Iron at a Western Pennsylvania Furnace.*

| | |
|---|---|
| 2,260 pounds of coke, | $1.65 |
| 4,032 pounds ore and cinder, | 4.25 |
| 496 pounds of limestone, | 0.38 |
| 6,798 pounds of raw materials, | $6.28 |
| Labor at furnace, | 85 |
| Supplies, | 36 |
| | $7.49 |

The owners of the furnace purchased ore and, therefore, the price delivered included an allowance for royalty, part of the coke used was purchased, and part made at ovens controlled by the furnace proprietors, but the price charged for coke allowed royalty in coal and repairs of ovens. Equating these upon as nearly as possible a similar basis, the contemporaneous net cost of ore, fuel, labor and actual supplies show for the

| | |
|---|---|
| Southern furnace, | $7.20 per ton of iron. |
| Western Pennsylvania furnace, | 7.49 per ton of iron. |

Neither estimate includes any allowance for interest, renewals,

office expenses or other items which enter into the gross cost of any pig iron, and these allowances are influenced by the character of the structure, quality of product, etc. A well built and thoroughly equipped furnace will require less money spent in renewals and repairs than one inferior in these particulars, and a plant which produces a large quantity of pig iron reduces the allowance for fixed charges, office expenses, etc., by dividing these by a greater number of tons than one which has a smaller output.

From the figures given it would appear that there is not a material difference in the cost at which similar pig iron can be made in Western Pennsylvania and in the Southern States. In selecting plants for the above comparison an effort was made to take fairly located furnaces; in either section other furnaces will be found which produce iron at larger or smaller costs per ton. It will be noticed from the above that the southern furnaces require nearly 40 per cent. more raw materials than the Western Pennsylvania furnace to make a ton of pig iron, but the short hauls necessary to assemble these raw materials at the southern furnace give it the advantage above indicated. In the southern furnace the increased cost for fuel is a partial offset for the richer and more expensive ores used at the northern furnace. As these ores are carried farther east the additional freight charge increases their cost and gives an apparent advantage to southern iron in Pennsylvania.

*Cost of Producing Pig Iron at an Eastern Pennsylvania Furnace.*

The following is the cost of raw materials, furnace labor and the regular supplies at a blast furnace in Eastern Pennsylvania making foundry iron from local ores enriched by the Lake Superior ores, using mixed anthracite and coke:

| | |
|---|---|
| Fuel, | $3.40 |
| Ores, | 4.80 |
| Limestone, | 0.30 |
| Total raw materials, | $8.50 |
| Furnace labor, | 80 |
| Supplies, | 30 |
| | $9.60 |

A similar estimate for mill iron would approximate $9.00 per ton, or about $1.50 per ton in advance of the cost at a Western Pennsylvania furnace. It is stated that one-third of the net cost of making iron at this plant was represented by railroad freights, further emphasizing the advantage of nearby supplies of raw materials.

The cost at blast furnaces in Eastern Ohio and Western Virginia will approximate the figures given for the Western Pennsylvania furnace.

The above cost of foundry iron in Eastern Pennsylvania closely approaches that given for the production of pig iron of Bessemer grade in Western Pennsylvania from Lake Superior ores smelted with coke.

*Cost of Bessemer Pig Iron in Western Pennsylvania.*

| | |
|---|---|
| Ore, | $6.25 |
| Coke, | 1.70 |
| Limestone, | 0.50 |
| Total raw materials, | $8.45 |
| Labor at furnace, | 85 |
| Supplies, | 40 |
| | $9.70 |

These are not figures of estimate of total cost, for to those given there must be added an allowance for administration, renewals, general repairs, interest, depreciation and losses. A short season of inferior operation, a scaffold, an accident or a strike may add seriously to the cost of manufacture for months. Without taking all of these into consideration no actual comparisons can be made, and managers are naturally averse to making public the total cost of the metal they produce. The figures above given, merely, are a general guide to the relative advantages of the different localities at the present time. There are, however, numerous changes in the price of ore, fuel, freights, etc., and disturbances due to other causes which practically make any estimate useful only for the date which it covers.

A resume of a series of years will demonstrate the influence of these changes, and illustrate that to keep up with the progress of the nation, the cost of pig iron and the prices which it commands have a downward tendency, due to the application of better methods, and of labor saving appliances.

In 1893 a tabulated statement of the items entering into the cost of a ton of pig iron at the furnaces of the Thomas Iron Company for each six months for 27 years, appeared in "The Mineral Industry." An analysis of this statement shows a maximum consumption of coal per ton of pig iron made 2 tons, 968 pounds in 1855, and a minimum of 1 ton, 712 pounds in 1892, the amount of ore required ranging from 2 tons, 1,353 pounds in 1856, to 1 ton, 1,843 pounds in 1890.

Up to 1855 the average coal consumption in any six months per ton of iron made had not fallen below 4,000 pounds, and for most of the 20 years it had exceeded two tons. Another decade passed before the fuel consumption had fallen to one and one-half tons, and the statement shows that one and a third tons were required in 1892.

The extent to which coke was used as a mixture in late years is not given, but the addition of this fuel while possibly to be credited for part of the low consumption, is probably responsible for the increased cost of fuel per ton. Similarly the richer ores used commanded a higher price per ton than leaner material.

This table is valuable as indicating the fluctuations in the costs of materials, and is the most complete record so far published. The various items of labor cannot be traced as closely in their variations because they are reported in connection with repairs, and other charges but the figures show how changed these amounts are in different years. The annual product and the grades of iron which compose it, also offer an explanation for some of the items of cost.

An examination of the table shows that the improvement in the quality of ores used permitted a material reduction in the amount of limestone required per ton of iron, the average maxima being 1 ton, 1,527 pounds in the last half of 1864, and the average minima 1,474 pounds in the six months ending June, 1890.

The influence of richer ores added to improved practice is also evident in the total product, the extremes in the table being 6,445 tons of iron made in the six months ending December, 1855 and 88,176 tons in the first half of the year 1887. It must be remembered that the demand for iron affects the activity of all blast furnaces.

The fluctuations in the prices paid for raw materials is also interesting, these show that the average cost of one ton of fuel in the six months ending with December, 1864 was $7.03 per ton, while in the last six months of 1861 it was but $2.36 per ton; the least outlay for fuel per ton of iron, i. e., the value of the quantity required, was in the first half of the year 1892, an average of $3.48 per ton, while the greatest outlay was the average of $16.51 in the last half of 1864. Similar data as to the cost of ore show the minimum to have been $2.39 per ton in the last half of the year 1862, and the highest $6.02 per ton in the last half of the year 1872, while the average cost for ore per ton of pig iron varied from $14.51 in the same period to $5.34 in the last six months of 1862. The average cost of a ton of limestone fluctuated from thirty cents in the last half of the year 1860 to eighty-two cents in the last half of the year 1869. The average cost per ton of product being lowest in the first halves of the years 1890, 1891 and 1892, viz: thirty-five cents, and highest in the last half of 1869, viz: $1.30.

The allowances for labor and repairs ranged from $2.04 per ton

in the last six months of 1880, to $8.06 in the first six months of 1871, while the total cost of the various items mentioned in the table show that the maximum average total cost per ton of product was $36.07 in the last half of 1864, and the minimum but $12.94 in the first half of 1892. It however may be interesting to note that from the middle of 1860 to the middle of 1862 the total cost ranged from $13.05 to $14.02 per ton of product, and that subsequent to 1885 the average cost has not exceeded $15.00 per ton except for one year.

The growth in output is shown to have increased from about 200 tons per week per furnace to nearly 400 tons per week per furnace. This is taking into consideration the entire plant, all of which may not be active simultaneously.

Data subsequent to June, 1892, cannot be supplied.

## CONCLUSION.

It is not surprising that the national pig iron industry, the annual product of which has grown in eighty years from 54,000 to 9,200,000 gross tons, has attracted other industries to locate near the blast furnaces. We need not go back to the first recorded output of 53,908 gross tons of pig iron in 1810 to measure this remarkable progress. In a half century the country increased the pig iron output to over thirty times what it was in 1840, but it was not until 1864, that the annual product of the United States exceeded 1,000,000 gross tons of pig iron, in 1872 it reached in round numbers 2,500,000, in 1881, 4,000,000; in 1886, 5,500,000; in 1887, 6,500,000 and in 1889, 7,500,000 gross tons were produced. The maximum of 9,202,703 gross tons is credited to the year 1890.

An examination of the first diagram (page 108) shows that the quantity of pig iron produced in Pennsylvania has in most of the years reported approximated one-half of the output of the United States; for fourteen of the twenty-three years the percentages were below fifty, and nine years above fifty, the extreme being 54 per cent. of the country's total in 1885, and 42½ per cent. in 1875.

The minimum production of pig iron in the State since 1872, was 857,932 gross tons in 1875, and the maximum 4,415,329 long tons in 1890. In the twenty-three years covered by the diagram the total pig iron output of the United States has been 108,369,286 gross tons of which Pennsylvania contributed 54,413,648 gross tons or 50.21 per cent.

Within the past decade there have been discussion as to the comparative advantages of producing pig iron in the northern and southern states, and the statements were as a rule based upon results at blast furnaces in Pennsylvania and Alabama. The former was naturally selected as being the heaviest producer of pig iron,

reaching out further for a market than most other states, while the latter was chosen because it has by rapid strides advanced in a few years from a small output to be a contributor of large quantities of pig iron. This progress in Alabama has been brought about by a combination of circumstances, most prominent of which is the juxtaposition of extensive beds of iron ore and of coking coal, especially in the vicinity of Birmingham, the ore and coal being cheaply mined, and having to cover but short distances to reach the smelting plants, permit of producing iron at costs which are abnormally low. The development of the iron industry in Alabama practically dates from 1880, previous to which time the State contributed but a small quantity of iron which was smelted with charcoal, but subsequent to that date, furnaces rapidly followed each other, and the financing of these enterprises, supplemented by liberal advertisement of real estate speculations based upon blast furnace location, attracted attention to Alabama and other southern states, and familiarized the public with figures of pig iron production with both mineral fuel and charcoal, which were interpreted as suggesting the decadence of the northern industry, particularly that of Pennsylvania.

The advantage of having coking coal close to large deposits of iron ore as in portions of Virginia, Tennessee, Georgia and Alabama undoubtedly offer opportunities for an extended industrial development in those states, but the distance from points of large consumption of pig iron off-set these advantages to a greater or less extent. At present the manufacturing interests of these states are far from being sufficient to utilize the product of their blast furnaces, and the character of pig iron produced restricts its use to foundry and rolling mill grades. Efforts to introduce steel manufacture are, however, being made, but the probabilities do not favor an immediate important development of this specialty.

Pennsylvania, on the other hand, has numerous local industries to utilize the pig iron made, and statistics following indicate a growth in the quantity of metal produced, in excess of that due to augmented population. Notwithstanding the great decrease in the number of furnaces and dependence upon sources of iron ore from without the state boundaries, Pennsylvania consumes more pig iron than it produces, while the reverse is true of the group of Southern States named.

Probably the true position of Pennsylvania is better exhibited by the fact that according to census returns 100 tons of pig iron were produced.

In 1860 for every 501 inhabitants of the State.
In 1870 for every 382 inhabitants of the State.
In 1880 for every 248 inhabitants of the State.
In 1890 for every 125 inhabitants of the State.

Showing a constantly augmenting output per capita, while corresponding data for the entire country indicate that 100 tons of pig iron were made.

In 1860 for every 3,184 inhabitants of the United States.

In 1870 for every 2,104 inhabitants of the United States.

In 1880 for every 1,486 inhabitants of the United States.

In 1890 for every 732 inhabitants of the United States.

Pennsylvania has, therefore, held its position not merely by augmented output, but also by increased product per inhabitant, but the extent to which this may be expected in the future will however, be more within the limit of maintaining its relative position, than of great advance, for the development of mineral resources of other states, and the utilization of these by industries, will of necessity cause these states to assume more prominent positions.

Ohio although a producer of pig iron since 1804, did not assume a prominent position until about 1860. At first pig iron was produced with charcoal from native carbonate ores, and later on bituminous coal was also utilized as fuel. When transportation improved, the richer iron ores from the Lake Superior region supplanted the leaner native carbonates, and this district now supplies most of the iron ore used in Ohio blast furnaces. This State holds second position as a pig iron producer, the maximum output being nearly one and a quarter million gross tons of pig metal in 1892. In 1894, however, but nine hundred thousand gross tons were manufactured.

The development of Alabama has been referred to, and the only other state which up to the present time has produced a half a million tons of pig iron per annum is Illinois. This state although ranking third as a pig iron producer in 1894, did not manufacture any pig iron until 1839, and it has only been since 1880 that it assumed a prominent place. Illinois is dependent upon Michigan, Wisconsin and Minnesota for her iron ore, and Pennsylvania and West Virginia for coke, the advantageous location of Chicago, (in the vicinity of which all the pig iron is produced) both as a place for the assembling of raw materials and the distribution of the finished product, a good home market, being alone responsible for her present position.

Concerning the production and consumption of pig iron in the United States, the Hon. Abram S. Hewitt stated in 1890 that, "Between 1830 and 1860, the production of iron increased twice as fast as the population; between 1860 and 1890, it increased four times as rapidly, in reality over four times, thus proving that the national wealth continues to grow from decade to decade, at a rate of acceleration of which the world affords no previous example. Inasmuch as during all this time, we have imported iron in addition to our production, it follows that the consumption per capita has also increased more rapidly than population. In 1855, according to careful

calculations, we were consuming iron at the rate of 117 pounds per head, whereas in 1890 the consumption has increased to rather more than 300 pounds per head."

A careful estimate places the amount of money directly invested in the active blast furnaces of Pennsylvania, independent of contingent industries at $60,000,000, using annually materials whose value at the furnaces approximates the invested capital, and there are employed from 15,000 to 20,000 persons about the furnaces, who receive over $7,000,000 annually as wages or salaries. The machinery equipment of the Pennsylvania blast furnaces aggregates probably 120,000 horse power.

In addition to the above capital and labor directly invested in, or employed at Pennsylvania furnaces, the contingent industries will include the money and labor expended in mining iron ore and coal, quarrying limestone, cutting wood and making charcoal, transporting the raw materials to the furnaces and the product to market; while the supplies demanded give, in their production, employment to many persons. With the exception of a part of the iron ore supply, and some few specialties, the materials, machinery, etc., utilized at Pennsylvania blast furnaces are obtained within the State, and many of the blast furnaces of the country depend on Pennsylvania for a considerable portion of their requirements.

It is unfortunate that the publication of the census statistics of iron and steel manufacture for 1890 have been delayed, for nearly one-half of the plants engaged in this industry in this country are located in Pennsylvania, and the Pennsylvania iron and steel works represent over one-half the total capital invested in this specialty in the United States. The number of employees and the total wages paid in Pennsylvania iron and steel works represent more than one-half of these for the entire country, and the same relation would hold good for the cost of materials used and the value of product. The tonnage of iron and steel made in Pennsylvania in 1890 represented a greater proportion of the nation's total than in the census years 1870 and 1880, for while in these two years the proportion was 50 per cent., in 1890 it approximated 53 per cent.

The statistics of iron ore in 1890 show a product for the United States of 16,056,943 gross tons, and to smelt this there were required about 5,000,000 tons of flux and 11,100,000 tons of anthracite and bituminous coal, coke and charcoal. The reports of the American Iron and Steel Association show that out of a total of 9,202,703 gross tons of pig iron made in 1890, Pennsylvania produced 4,415,329 gross tons. Assuming the average for the United States to hold good for Pennsylvania there would be a consumption in the blast furnace for 1890 of say

7,680,000 tons of iron ore, etc.
5,328,000 tons of fuel.
2,400,000 tons of flux.

---

15,408,000 tons of raw materials.

The manufacture of pig iron as a branch of an enormous industry, representing the capital and paying for wages and materials the amounts named, is of great importance to the Commonwealth, and questions as to its permanence are but natural. These queries are encouraged by the number of blast furnace plants which have been abandoned, but as already explained the annual production has augmented, and the ratio of the State to national output has been closely maintained.

In comparing the status of pig iron manufacture in Pennsylvania and elsewhere, the fact that the blast furnace industry of the State is not new must be considered, and as the advances in practice and structures were made, the older furnaces were forced out of the race or were remodelled. The abandonment of industries which had fulfilled their mission, or which are not of a size or equipment necessary for the present, was interpreted as indicating a decline in the position of Pennsylvania as a producer of pig iron. Such interpretation however, does not take into consideration the larger or more modern stacks which have been erected in place of some of the older ones, or located at new points with special advantages.

In the foregoing pages an effort has been made to indicate the changes in construction and arrangement of blast furnace plants during the three eras into which the monograph has been arbitrarily divided. These changes have also been detailed in connection with certain plants to show what radical advancement was made, and it is evident that in such an evolution only a small proportion of the blast furnaces of the State could survive. Location as to market facilities, and the assembling or purchase of materials, the capital at command of those operating the furnaces, and divers reasons, account for the existence of blast furnaces at, or their absence from certain points of the State. In the march of improvement the small independent furnaces, have had to struggle against larger plants, where ample capital has been at command to erect furnaces, equip them, supply them with materials and carry the product in stock, consequently the number of single furnaces in Pennsylvania has decreased, and large furnaces have displaced smaller ones, but to-day one-third of the blast furnaces of Pennsylvania are single stacks, and about twenty per cent. of the total number may be considered as small furnaces. The single furnaces and twin plants taken together represent 70 per cent. of the total number of plants in the State. The tendency however is to group a series of plants under

one management, and this offers advantages in purchasing materials, and marketing product, as well as in reducing management and other fixed charges per ton of iron made. The records of many of the individual plants or groups of plants are most creditable, and their managers have won renown by the results achieved; others have merely "followed afar off."

This paper could have been extended by crediting to various industries the work which has been accomplished, but it was deemed best to treat the subject by selecting typical illustrations, rather than to discuss details in connection with a number of works. What the future may bring in the way of improved processes cannot be prophesied, but a candid examination of the resources of the United States point to the probability that if Pennsylvania loses her proud position as the greatest iron producing and iron and steel manufacturing section of the country, it will be because other portions of the nation utilize natural resources, and not because of a decadence of the industry of the State. As long as iron is produced by present methods and in forms now familiar to all, there will be much to be said concerning "the manufacture of pig iron in Pennsylvania."

# STATISTICS RELATING TO MANUFACTURING IN PENNSYLVANIA.

The last report of this bureau contained an investigation concerning manufacturing during the years 1892 and 1893. The facts related to the number of persons employed, the amount of wages paid and the value of the product. These facts were not derived from all of the plants in the State, but from a sufficient number, it was believed, to form correct general deductions. A similar inquiry has been conducted for 1894, and comparisons have also been made with the returns obtained for the preceding years.

Several important changes may be noted. First, there has been a decrease in the number of employes in all the industries. This is shown in the following table:

| | Employes. | | |
|---|---|---|---|
| | 1892. | 1893. | 1894. |
| Iron, | 103,471 | 92,890 | 79,829 |
| Carpets, | 4,648 | 4,097 | 3,623 |
| Hosiery, | 1,786 | 1,547 | 1,513 |
| Woolen, | 5,390 | 4,543 | 4,001 |
| Cotton, | 3,818 | 3,490 | 3,093 |
| Glass, | 7,239 | 6,579 | 5,152 |
| Miscellaneous, | 23,338 | 19,507 | 19,099 |

Another marked decline is in the value of the product. In most cases probably the work of production has been conducted at a loss. Unquestionably this is true if proper deductions are made for the wear and tear of the plant, etc. Another result of the continued decline is a deterioration in the quality of the products. Every manufacturer is desirous of manufacturing as cheaply as possible, and has sought in every way to lessen the cost of production. This complaint is heard everywhere, and is one of the marked changes of the times through which we are passing, and which is generally ascribed to unremunerative prices.

With respect to the relative depression of the industries, that of the iron industry was the greatest. A few improvements occurred here and there, but they were slight. Since the opening of the present year there has been renewed activity. But, though the rates of wages were reduced in 1894, the decline in the prices and the dimuni-

tion in the quantity produced left the manufacturers, probably, in worse condition at the end than they were at the beginning of the year. It is unquestionably true that Pennsylvania manufacturers are suffering not only from the general conditions of business, but also from keen competition in the south and west. In both sections of the country numerous plants have been erected, possessing ample capital and skill, and the advantages that Pennsylvania formerly possessed have passed away. In the south, for example, the ore, fuel and flux lie close to each other and are concentrated at very low cost. The cost of transportation of the various elements entering into the production of pig iron is reduced to a minimum. Add to these advantages the lower wages paid to much of the labor employed and the aggregate advantages over Pennsylvania are very great. In Section D of this report will be found an article relating to the manufacture of pig iron in Pennsylvania which contains some interesting figures and statements relating to the subject. In the manufacture of cheaper iron, especially, the south has a pre-eminence over every other place in the world at the present time. It is asserted that if the owners of the Cornwall ore bank were inclined to sell their ore at a lower price, yet one that would yield them a small profit, iron could still be cheaply made in this State. But the prices demanded are so high that this natural advantage is completely neutralized.

Two reasons are given for their course. One is that some of them are the owners of other furnaces and plants and, therefore, are not especially desirous of selling to persons who will compete with them in manufacturing products for the market. In other words, they believe that they can make more on their manufactured products than they can by selling ores at a low figure. So, a comparatively high price is demanded for ore. Yet they cannot be blamed if they decline to sell at prices that would render their own operations unremunerative. But, looking at the subject in the most general way, it is to be regretted that this great ore deposit cannot be untilized more freely by the iron industry in our State. Another reason given is that the limit of the ore bank has been ascertained, and at the present rate of extraction every ton of ore will be mined within twenty-five or thirty years. There is no other great ore deposit in Pennsylvania, and it may be a wise policy to demand a sufficient price to prevent the sale of it at such low figures as would lead to its early exhaustion.

Another consequence of the low prices now prevailing is the formation of trusts. The most important trust formed during the year is that of the tanneries. The business has been unremunerative for several years, and in order to improve it a trust was formed that includes nearly, or all, of the tanneries in the State. It is certain that these trusts, from their own point of view, yield some very important advantages. First of all, there is a dimunition in the expense of man-

agement and a lessening of competition; indeed, this is the principal object for creating them. In the second place a more complete control is obtained over the production of their goods and the prices obtained for them. On the other hand, by increasing the profits, new competition is invited and the danger, therefore, is, unless profits are kept within a reasonable figure, that new concerns will be organized. One of the advantages immediately gained by the tannery trust was in the purchase of hides. Previously, tanners had competed with each other for them, and, consequently, slaughterers had obtained unreasonably high prices. For years tanners had paid far more for hides than they were justified in doing, considering the prices at which they sold their product. But as soon as the trust was formed the situation changed. They then fixed the prices they were willing to pay for hides, and the slaughterers were compelled to yield. The reduction was very large, and this at once changed the situation in favor of the tanners. These facts are sufficient to show the importance of such combinations to the persons who unite in forming them, and the tendency to do this is more marked than ever. At the present time the paper manufacturers are completing the arrangements of this character. In the buliding trades trusts have been formed to some extent among those who furnish doors, sashes, blinds and other materials that enter into the construction of buildings. These results may be ascribed directly to the low prices that prevail, the keen competition in business and the losses that are so general in manufacturing pursuits.

The following is a summary of the statistics obtained for 1894, and a comparison with those obtained for 1892 and 1893:

Number of plants that made returns in 1894, 412.

| | 1892. | 1893. | 1894. |
|---|---|---|---|
| Average number of employes, | 149,690 | 132,653 | 116,310 |

| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
|---|---|---|---|
| Decrease in average number of employes, | 17,037 | 16,343 | 33,380 |
| Percentage of decrease in average number of employes, | 11⅔ | 12⅓ | 22⅞ |

| | 1892. | 1893. | 1894. |
|---|---|---|---|
| Aggregate amount of wages paid, | $72,575,550 | $60,629,740 | $48,268,005 |

| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892 |
|---|---|---|---|
| Decrease in the aggregate amount of wages paid, | $11,947,810 | $12,359.735 | $24,307,545 |
| Percentage of decrease in aggregate amount of wages paid, | 16½ | 20⅓ | 33½ |
| Percentage of increase in per capita of wages paid, | 12½ | 01⅔ | 14 |

| | 1892. | 1893. | 1894. |
|---|---|---|---|
| Value of product, | $286,402,751 | $236,919,298 | $191,492,115 |

| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
|---|---|---|---|
| Decrease in value of product, | $49,483,453 | $45,427,183 | $94,910,636 |
| Percentage of decrease in value of product, | 17¼ | 19 1-6 | 33⅓ |

# STATISTICS RELATING TO MANUFACTURING IN PENNSYLVANIA.

*Statistics Relating to Manu*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| *Iron.* | | | | | | | | | |
| Bolts, Nuts, Bar Iron, &c., | 480 | 520 | 440 | 40 | ..... | ..... | ..... | 80 | 40 |
| Builders' Hardware, | 400 | 325 | 300 | ..... | ..... | ..... | 75 | 25 | 100 |
| Boilers, Heaters, &c.,* | 60 | 60 | ..... | ..... | ..... | ..... | ..... | 60 | 60 |
| Skelp Iron, | 350 | 300 | 300 | ..... | ..... | ..... | 50 | ..... | 50 |
| Hardware and Tacks, | 120 | 115 | 110 | ..... | ..... | ..... | 5 | 5 | 10 |
| Steel and Structural Material, | 547 | 387 | 316 | ..... | ..... | ..... | 160 | 71 | 231 |
| Cars, Engines, Frogs and Switches, | 282 | 217 | 207 | ..... | ..... | ..... | 65 | 10 | 75 |
| Stoves, Heaters, &c., | 100 | 111 | 105 | 11 | ..... | 5 | ..... | 6 | ..... |
| Builders' Hardware, | 917 | 968 | 904 | 51 | ..... | ..... | ..... | 64 | 13 |
| Foundry and Machine Works, | 290 | 253 | 185 | ..... | ..... | ..... | 37 | 68 | 105 |
| Engines, Saw Mills, Separators, &c., | 450 | 322 | 374 | ..... | 52 | ..... | 128 | ..... | 76 |
| Ice Making Machinery, Engines, &c., | 498 | 280 | 196 | ..... | ..... | ..... | 218 | 84 | 302 |
| Engine and Repair Works, | 95 | 80 | 75 | ..... | ..... | ..... | 15 | 5 | 20 |
| Foundry and Machine Works, | 200 | 102 | 134 | ..... | 32 | ..... | 98 | ..... | 66 |
| Iron and Steel Plates and Bars, | 746 | 330 | 260 | ..... | ..... | ..... | 416 | 70 | 486 |
| Pig Iron,* | 122 | 112 | ..... | ..... | ..... | ..... | 10 | 112 | 122 |
| Pig Iron, &c., | 361 | 286 | 84 | ..... | ..... | ..... | 75 | 202 | 277 |
| Rolling Mill,* | 375 | 375 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Blast Furnace, | 105 | 100 | 80 | ..... | ..... | ..... | 5 | 20 | 25 |
| Boilers and Engines, | 153 | 109 | 70 | ..... | ..... | ..... | 44 | 39 | 83 |
| Blast Furnace, | 100 | 100 | 90 | ..... | ..... | ..... | ..... | 10 | 10 |
| Blast Furnace, | 80 | 80 | 80 | ..... | ..... | ..... | ..... | ..... | ..... |
| Blast Furnace, | 100 | 77 | 81 | ..... | 4 | ..... | 23 | ..... | 29 |
| Skelp Iron,* | 415 | 465 | ..... | 50 | ..... | ..... | ..... | 465 | 415 |
| Bolts, Nuts and Washers, | 135 | 175 | 120 | 40 | ..... | ..... | ..... | 55 | 15 |
| Car, Car Wheels, Castings, &c., | 155 | 137 | 119 | ..... | ..... | ..... | 18 | 18 | 36 |

*Plant not in operation in 1894.

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| 08⅓ | ..... | ..... | ..... | 15⅓ | 08⅓ | 310 | 310 | 295 | ..... | ..... | ..... | ..... | 15 | 15 |
| ..... | ..... | ..... | 18¾ | 07⅔ | 25 | 290 | 260 | 200 | ..... | ..... | ..... | 30 | 60 | 90 |
| ..... | ..... | ..... | ..... | ..... | ..... | 284 | 270 | ..... | ..... | ..... | ..... | 14 | 270 | 284 |
| ..... | ..... | ..... | 14⅓ | ..... | 14⅓ | 284 | 216 | 230 | ..... | 14 | ..... | 68 | ..... | 54 |
| ..... | ..... | ..... | 04 | 04⅓ | 08⅓ | 300 | 252 | 150 | ..... | ..... | ..... | 48 | 102 | 150 |
| ..... | ..... | ..... | 29 | 18⅓ | 42¾ | 266 | 233 | 188 | ..... | ..... | ..... | 33 | 45 | 78 |
| ..... | ..... | ..... | 26 | 04½ | 26½ | 280 | 227 | 216 | ..... | ..... | ..... | ..... | ..... | ..... |
| 11 | ..... | 05 | ..... | 05½ | ..... | 280 | 261 | 149 | ..... | ..... | ..... | 19 | 112 | 131 |
| 05½ | ..... | ..... | ..... | 06⅔ | 01⅓ | 299 | 240 | 199 | ..... | ..... | ..... | 59 | 41 | 100 |
| ..... | ..... | ..... | 12⅞ | 26⅞ | 36¼ | 306 | 302 | 289 | ..... | ..... | ..... | 4 | 13 | 17 |
| ..... | 16⅛ | ..... | 28½ | ..... | 16⅞ | 298 | 206 | 291 | ..... | 85 | ..... | 92 | ..... | 7 |
| ..... | ..... | ..... | 44 | 30 | 61¾ | 307 | 286 | 285 | ..... | ..... | ..... | 21 | 1 | 22 |
| ..... | ..... | ..... | 15¾ | 05⅛ | 21 | 335 | 240 | 270 | ..... | 30 | ..... | 95 | ..... | 65 |
| ..... | 31 | ..... | 49 | ..... | 33 | 313 | 313 | 313 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 54½ | 21¼ | 65¾ | 306 | 264 | 168 | ..... | ..... | ..... | 42 | 96 | 138 |
| ..... | ..... | ..... | 08 | ..... | ..... | 366 | 258 | ..... | ..... | ..... | ..... | 108 | 258 | 366 |
| ..... | ..... | ..... | 21 | 70¼ | 77 | 325 | 270 | 310 | ..... | 40 | ..... | 55 | ..... | 15 |
| ..... | ..... | ..... | ..... | ..... | ..... | 248 | 150 | ..... | ..... | ..... | ..... | 98 | 150 | 248 |
| ..... | ..... | ..... | 05 | 20 | 23¾ | 158 | 149 | 70 | ..... | ..... | ..... | 9 | 79 | 88 |
| ..... | ..... | ..... | 28⅞ | 35¾ | 54¼ | 298 | 260 | 295 | ..... | 35 | ..... | 38 | ..... | 3 |
| ..... | ..... | ..... | ..... | 10 | 01 | 365 | 245 | 210 | ..... | ..... | ..... | 120 | 35 | 155 |
| ..... | ..... | ..... | ..... | ..... | ..... | 156 | 225 | 146 | 69 | ..... | ..... | ..... | 79 | 10 |
| ..... | 04 | ..... | 23 | ..... | 29 | 270 | 240 | 254 | ..... | 14 | ..... | 30 | ..... | 16 |
| 12 | ..... | ..... | ..... | ..... | ..... | 183 | 200 | ..... | ..... | 17 | ..... | ..... | 200 | 183 |
| 30 | ..... | ..... | ..... | 31½ | 11 | 290 | 290 | 260 | ..... | ..... | ..... | ..... | 30 | 30 |
| ..... | ..... | ..... | 11½ | 13⅛ | 23⅓ | 300 | 290 | 295 | .... | 5 | ..... | 10 | ..... | 5 |

*Statistics Relating to Manu-*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Janney Car Coupler, | 663 | 570 | 416 | ..... | ..... | ..... | 93 | 154 | 247 |
| Springs, | 208 | 187 | 103 | ..... | ..... | ..... | 21 | 79 | 100 |
| Brass and Copper Tubes, | 58 | 75 | 60 | 17 | ..... | 2 | ..... | 15 | ..... |
| Bar Iron, | 250 | 250 | 250 | ..... | ..... | ..... | ..... | ..... | ..... |
| Bar Iron, | 211 | 203 | 200 | ..... | ..... | ..... | 8 | 3 | 11 |
| Stoves, | 110 | 110 | 110 | ..... | ..... | ..... | ..... | ..... | ..... |
| Stoves, Furnaces and Ranges, | 180 | 180 | 180 | ..... | ..... | ..... | ..... | ..... | ..... |
| Pig Iron,* | 95 | 74 | ..... | ..... | ..... | ..... | 21 | 74 | 95 |
| Bridges, Buildings, &c., | 200 | 150 | 172 | ..... | 22 | ..... | 50 | ..... | 28 |
| Bridges, &c., | 154 | 155 | 122 | 1 | ..... | ..... | ..... | 33 | 32 |
| Structural Work, | 300 | 250 | 122 | ..... | ..... | ..... | 50 | 128 | 178 |
| Iron and Steel Construction, | 573 | 535 | 387 | ..... | ..... | ..... | 38 | 148 | 186 |
| Iron Foundry and Construction, | 162 | 150 | 100 | ..... | ..... | ..... | 12 | 50 | 62 |
| Light Locomotives, | 261 | 276 | 221 | 15 | ..... | ..... | ..... | 55 | 40 |
| Boiler, Tank and Plate Iron Work, | 100 | 100 | 75 | ..... | ..... | ..... | ..... | 25 | 25 |
| Sheet Iron, Sheet Steel, &c., | 160 | 160 | 160 | ..... | ..... | ..... | ..... | ..... | ..... |
| Iron and Steel Sheets, | 785 | 660 | 738 | ..... | 78 | ..... | 125 | ..... | 47 |
| Sheet Iron and Sheet Steel, | 375 | 375 | 375 | ..... | ..... | ..... | ..... | ..... | ..... |
| Merchant Bar Iron, Steel, &c., | 400 | 455 | 400 | 55 | ..... | ..... | ..... | 55 | ..... |
| Iron and Steel Rolling Mills. | 360 | 320 | 320 | ..... | ..... | ..... | 40 | ..... | 40 |
| Iron and Steel Works, | 3,550 | 2,992 | 3,223 | ..... | 231 | ..... | 558 | ..... | 327 |
| Bar Iron, Nails and Pig Iron. | 374 | 314 | 307 | ..... | ..... | ..... | 60 | 7 | 67 |
| Bar Steel and Railroad and Boat Spikes, | 240 | 196 | 189 | ..... | ..... | ..... | 44 | 7 | 51 |
| Malleable Iron Foundry, | 135 | 124 | 118 | ..... | ..... | ..... | 11 | 6 | 17 |
| Wrought Iron Pipe, | 850 | 800 | 800 | ..... | ..... | ..... | 50 | ..... | 50 |
| Sheet Iron, | 972 | 972 | 850 | ..... | ..... | ..... | ..... | 122 | 122 |
| Sheet Iron and Sheet Steel, | 176 | 224 | 224 | ..... | 50 | 50 | ..... | ..... | ..... |

*Plant not in operation in 1894.

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| ..... | ..... | ..... | 14 | 27¼ | 37¼ | 310 | 248 | 203 | ..... | ..... | ..... | 62 | 45 | 107 |
| ..... | ..... | ..... | 10 | 42¼ | 50 | 312 | 312 | 255 | ..... | ..... | ..... | ..... | 57 | 57 |
| 29 | ..... | 03⅓ | ..... | 20 | ..... | 313 | 280 | 306 | ..... | 26 | ..... | 33 | ..... | 7 |
| ..... | ..... | ..... | ..... | ..... | ..... | 273 | 251 | 200 | ..... | ..... | ..... | 22 | 51 | 73 |
| ..... | ..... | ..... | 03¾ | 01½ | 05⅙ | 274 | 268 | 185 | ..... | ..... | ..... | 6 | 83 | 89 |
| ..... | ..... | ..... | ..... | ..... | ..... | 252 | 224 | 150 | ..... | ..... | ..... | 28 | 74 | 102 |
| ..... | ..... | ..... | ..... | ..... | ..... | 307 | 302 | 156 | ..... | ..... | ..... | 5 | 46 | 51 |
| ..... | ..... | ..... | 22 | ..... | ..... | 365 | 195 | ..... | ..... | ..... | ..... | 170 | 195 | 365 |
| ..... | 14⅔ | ..... | 25 | ..... | 14 | 308 | 302 | 306 | ..... | 4 | ..... | 6 | ..... | 2 |
| 006⅔ | ..... | ..... | ..... | 21⅓ | 20¾ | 308 | 308 | 307 | ..... | ..... | ..... | ..... | 1 | 1 |
| ..... | ..... | ..... | 16⅔ | 51⅙ | 56⅔ | 313 | 295 | 300 | ..... | 5 | ..... | 18 | ..... | 13 |
| ..... | ..... | ..... | 06½ | 28 | 32⅔ | 307 | 307 | 306 | ..... | ..... | ..... | ..... | 1 | 1 |
| ..... | ..... | ..... | 07 | 33⅓ | 10 | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| 06 | ..... | ..... | ..... | 19⅞ | 15⅓ | 306 | 273 | 200 | ..... | ..... | ..... | 33 | 73 | 106 |
| ..... | ..... | ..... | ..... | 25 | 25 | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | ..... | ..... | ..... | 280 | 270 | 260 | ..... | ..... | ..... | 10 | 10 | 20 |
| ..... | 11⅞ | ..... | 16 | ..... | 06 | 288 | 267 | 311 | ..... | 44 | 23 | 21 | ..... | ..... |
| ..... | ..... | ..... | ..... | ..... | ..... | 290 | 230 | 295 | ..... | 65 | 5 | 60 | ..... | ..... |
| 13¾ | ..... | ..... | ..... | 12 | ..... | 277 | 219 | 241 | ..... | 22 | ..... | 58 | ..... | 36 |
| ..... | ..... | ..... | 11 | ..... | 11⅛ | 211 | 133 | 200 | ..... | 77 | ..... | 88 | ..... | 11 |
| ..... | 07¾ | ..... | 15⅔ | ..... | 09¼ | 271 | 292 | 301 | 21 | 9 | 30 | ..... | ..... | ..... |
| ..... | ..... | ..... | 16 | 02¼ | 18 | 257 | 211 | 200 | ..... | ..... | ..... | 46 | 11 | 57 |
| ..... | ..... | ..... | 19 | 03¾ | 21¼ | 301 | 181 | 196 | ..... | 15 | ..... | 20 | ..... | 5 |
| ..... | ..... | ..... | 08 | 04⅞ | 12⅔ | 304 | 254 | 251 | ..... | ..... | ..... | 50 | 3 | 53 |
| ..... | ..... | ..... | 06 | ..... | 05⅞ | 271 | 247 | 286 | ..... | 39 | 15 | 24 | ..... | ..... |
| ..... | ..... | ..... | ..... | 12⅔ | 12⅔ | 268 | 258 | 255 | ..... | ..... | ..... | 10 | 3 | 13 |
| ..... | 22⅓ | 28½ | ..... | ..... | ..... | 290 | 273 | 228 | ..... | ..... | ..... | 17 | 45 | 62 |

*Statistics Relating to Manu-*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Sheet Iron and Sheet Steel,.. | 150 | 150 | 150 | ..... | ..... | ..... | ..... | ..... | ..... |
| Steel, ..... | 500 | 400 | 400 | ..... | ..... | ..... | 100 | ..... | 100 |
| Steel, ..... | 810 | 567 | 468 | ..... | ..... | ..... | 243 | 99 | 342 |
| Steel Works, ..... | 470 | 440 | 407 | ..... | ..... | ..... | 30 | 33 | 63 |
| Iron and Steel Works, ..... | 646 | 298 | 100 | ..... | ..... | ..... | 348 | 198 | 546 |
| Crucibles, ..... | 28 | 25 | 25 | ..... | ..... | ..... | 3 | ..... | 3 |
| Iron, Steel, Hardware, &c.,.. | 2,520 | 1,667 | 1,088 | ..... | ..... | ..... | 853 | 579 | 1,432 |
| Crucibles and Open Hearth Steel, ..... | 610 | 423 | 400 | ..... | ..... | ..... | 187 | 23 | 210 |
| Iron,.... ..... | 250 | 175 | 175 | ..... | ..... | ..... | 75 | ..... | 75 |
| Iron,.... ..... | 800 | 500 | 300 | ..... | ..... | ..... | 300 | 200 | 500 |
| Rolling Skelp Iron, ..... | 468 | 530 | 530 | 62 | ..... | 62 | ..... | ..... | ..... |
| Iron and Steel, Hoop and Band, &c., ..... | 320 | 255 | 150 | ..... | ..... | ..... | 65 | 105 | 170 |
| Brass Founders, Iron Pipe, &c., ..... | 97 | 87 | 82 | ..... | ..... | ..... | 10 | 5 | 15 |
| Rolling Mill Machinery, ..... | 96 | 65 | 44 | ..... | ..... | ..... | 31 | 21 | 52 |
| Foundry and Machine Shops, | 114 | 92 | 100 | ..... | 8 | ..... | 22 | ..... | 14 |
| Brass Founders, Machinists, &c., ..... | 67 | 70 | 77 | 3 | 7 | 10 | ..... | ..... | ..... |
| Iron and Steel, ..... | 764 | 812 | 820 | 48 | 8 | 56 | ..... | ..... | ..... |
| Pig Metal, ..... | 188 | 195 | 200 | 7 | 5 | 12 | ..... | ..... | ..... |
| Founders and Machinists, ... | 216 | 125 | 149 | ..... | 24 | ..... | 91 | ..... | 67 |
| General Machinery, ..... | 334 | 288 | 208 | ..... | ..... | ..... | 46 | 80 | 126 |
| Engines and Boilers, ..... | 590 | 600 | 421 | 10 | ..... | ..... | ..... | 179 | 169 |
| Boilers, ..... | 80 | 100 | 80 | 20 | ..... | ..... | ..... | 20 | ..... |
| Radiators, ..... | 77 | 101 | 98 | 24 | ..... | 21 | ..... | 3 | ..... |
| Iron Products, ..... | 1,838 | 1,697 | 1,433 | ..... | ..... | ..... | 141 | 264 | 405 |
| Axles, ..... | 18 | 15 | 14 | ..... | ..... | ..... | 3 | 1 | 4 |
| Roll Foundry, ..... | 127 | 161 | 142 | 34 | ..... | 15 | ..... | 19 | ..... |
| Iron Foundry, ..... | 50 | 30 | 30 | ..... | ..... | ..... | 20 | ..... | 20 |
| Foundry, ..... | 98 | 107 | 106 | 9 | ..... | 8 | ..... | 1 | ..... |

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| ..... | ..... | ..... | ..... | ..... | ..... | 291 | 247 | 250 | ..... | 3 | ..... | 44 | ..... | 41 |
| ..... | ..... | ..... | 20 | ..... | 20 | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 30 | 17½ | 42⅛ | 300 | 218 | 173 | ..... | ..... | ..... | 82 | 45 | 127 |
| ..... | ..... | ..... | 06 | 07½ | 13⅓ | 307 | 301 | 295 | ..... | ..... | ..... | 6 | 6 | 12 |
| ..... | ..... | ..... | 54 | 66½ | 85⅓ | 260 | 196 | 75 | ..... | ..... | ..... | 64 | 121 | 185 |
| ..... | ..... | ..... | 10 | ..... | 10¾ | 240 | 198 | 225 | ..... | 27 | ..... | 42 | ..... | 15 |
| ..... | ..... | ..... | 34 | 35 | 57 | 260 | 180 | 270 | ..... | 90 | 10 | 80 | ..... | ..... |
| ..... | ..... | ..... | 30 | 05⅓ | 32⅔ | 290 | 275 | 290 | ..... | 15 | ..... | 15 | ..... | ..... |
| ..... | ..... | ..... | 30 | ..... | 30 | 250 | 150 | 60 | ..... | ..... | ..... | 100 | 90 | 190 |
| ..... | ..... | ..... | 37½ | 40 | 62½ | 310 | 200 | 310 | ..... | 110 | ..... | 110 | ..... | ..... |
| 11½ | ..... | 13¼ | ..... | ..... | ..... | 235 | 150 | 209 | ..... | 59 | ..... | 85 | ..... | 29 |
| ..... | ..... | ..... | 20⅓ | 42 | 53⅛ | 255 | 206 | 218 | ..... | 12 | ..... | 49 | ..... | 37 |
| ..... | ..... | ..... | 10⅓ | 05¾ | 15½ | 307 | 306 | 306 | ..... | ..... | ..... | 1 | ..... | 1 |
| ..... | ..... | ..... | 31 | 31⅓ | 54⅛ | 309 | 285 | 309 | ..... | 24 | ..... | 24 | ..... | ..... |
| ..... | 08⅔ | ..... | 19 | ..... | 12⅓ | 306 | 286 | 302 | ..... | 16 | ..... | 20 | ..... | 4 |
| 04½ | 10 | 15 | ..... | ..... | ..... | 300 | 300 | 250 | ..... | ..... | ..... | ..... | 50 | 50 |
| 06 | 01 | 07⅓ | ..... | ..... | ..... | 218 | 215 | 229 | ..... | 14 | 11 | 3 | ..... | ..... |
| 04 | 02¾ | 06⅓ | ..... | ..... | ..... | 305 | 333 | 300 | 28 | ..... | ..... | ..... | 33 | 5 |
| ..... | 19¼ | ..... | 41 | ..... | 31¼ | 300 | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 13⅔ | 27½ | 38¼ | 299 | 299 | 329 | ..... | 30 | 30 | ..... | ..... | ..... |
| 01⅔ | ..... | ..... | ..... | 21 | 28⅔ | 306 | 290 | 295 | ..... | 5 | ..... | 16 | ..... | 11 |
| 25 | ..... | ..... | ..... | 20 | ..... | 300 | 250 | 300 | ..... | 10 | ..... | 10 | ..... | ..... |
| 31 | ..... | 27⅓ | ..... | 03 | ..... | 271 | 290 | 292 | 19 | 2 | 21 | ..... | ..... | ..... |
| ..... | ..... | ..... | 07⅔ | 15⅞ | 22⅛ | 365 | 365 | 365 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 16⅔ | 06⅔ | 22¼ | 279 | 248 | 203 | ..... | ..... | ..... | 31 | 45 | 76 |
| 27 | ..... | 11½ | ..... | 11⅞ | ..... | 310 | 305 | 305 | ..... | ..... | ..... | 5 | ..... | 5 |
| ..... | ..... | ..... | 40 | ..... | 40 | 306 | 220 | 250 | ..... | 30 | ..... | 86 | ..... | 56 |
| 09 | ..... | 08⅛ | ..... | 01 | ..... | 269 | 228 | 236 | ..... | 8 | ..... | 41 | ..... | 33 |

*Statistics Relating to Manu-*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Iron Foundry, | 46 | 46 | 33 | ..... | ..... | ..... | ..... | 13 | 13 |
| Rolling Mill and Tin Plate Machinery, &c., | 90 | 105 | 100 | 15 | ..... | 10 | ..... | 5 | ..... |
| Iron, Steel and Brass Castings, &c., | 428 | 361 | 305 | ..... | ..... | ..... | 67 | 56 | 123 |
| Pig Iron, | 280 | 231 | 200 | ..... | ..... | ..... | 49 | 31 | 80 |
| Steel Castings, | 156 | 74 | 90 | ..... | 16 | ..... | 82 | ..... | 66 |
| Steel Castings, | 485 | 411 | 400 | ..... | ..... | ..... | 74 | 11 | 85 |
| Merchant Bar Iron, | 450 | 450 | 350 | ..... | ..... | ..... | ..... | 100 | 100 |
| Steel and Copper, | 2,150 | 2,050 | 1,900 | ..... | ..... | ..... | 100 | 150 | 250 |
| Iron Beams, Girders, &c., | 99 | 106 | 109 | 7 | 3 | 10 | ..... | ..... | ..... |
| Iron Founders, | 125 | 125 | 46 | ..... | ..... | ..... | ..... | 79 | 79 |
| Iron Founders, | 340 | 275 | 205 | ..... | ..... | ..... | 65 | 70 | 135 |
| Stoves, | 54 | 50 | 50 | ..... | ..... | ..... | 4 | ..... | 4 |
| Iron Founders, | 128 | 136 | 160 | ..... | ..... | ..... | 8 | 14 | 22 |
| Boiler Makers, | 50 | 58 | 65 | 8 | 7 | 15 | ..... | ..... | ..... |
| Iron Founders, | 220 | 175 | 150 | ..... | ..... | ..... | 45 | 25 | 70 |
| Boiler Makers, | 120 | 80 | 25 | ..... | ..... | ..... | 40 | 55 | 95 |
| Boiler Makers,* | 265 | 190 | ..... | ..... | ..... | ..... | 75 | 190 | 265 |
| Engines, | 120 | 75 | 47 | ..... | ..... | ..... | 45 | 28 | 73 |
| Malleable Iron Castings, | 266 | 238 | 175 | ..... | ..... | ..... | 28 | 63 | 91 |
| Engines and Oil Well Supplies, | 155 | 127 | 125 | ..... | ..... | ..... | 28 | 2 | 30 |
| Engines, | 55 | 40 | 50 | ..... | 10 | ..... | 15 | ..... | 5 |
| Boiler Works, | 60 | 49 | 32 | ..... | ..... | ..... | 11 | 17 | 28 |
| Engines, | 70 | 70 | 70 | ..... | ..... | ..... | ..... | ..... | ..... |
| Iron Works, | 760 | 730 | 700 | ..... | ..... | ..... | 30 | 30 | 60 |
| Blast Furnace, | 100 | 100 | 140 | ..... | 40 | 40 | ..... | ..... | ..... |
| Iron, | 83 | 80 | 72 | ..... | ..... | ..... | 3 | 8 | 11 |
| Iron Works,* | 430 | 454 | ..... | ..... | ..... | ..... | 26 | 454 | 480 |

*Plant not in operation in 1894.

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| ..... | ..... | ..... | ..... | 28¼ | 28¼ | 310 | 240 | 206 | ..... | ..... | ..... | 70 | 34 | 104 |
| 16⅔ | ..... | 11⅛ | ..... | 04¾ | ..... | 280 | 270 | 310 | ..... | 40 | 30 | 10 | ..... | ..... |
| ..... | ..... | ..... | 15½ | 15½ | 29¼ | 310 | 310 | 310 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 10⅞ | 13⅜ | 28½ | 365 | 365 | 365 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | 21⅔ | ..... | 52½ | ..... | 42¼ | 306 | 268 | 310 | ..... | 42 | 4 | 38 | ..... | ..... |
| ..... | ..... | ..... | 16 | 02⅔ | 17½ | 256 | 241 | 300 | ..... | 59 | 44 | 15 | ..... | ..... |
| ..... | ..... | ..... | ..... | 22¼ | 22¼ | 267 | 182 | 137 | ..... | ..... | ..... | 85 | 45 | 130 |
| ..... | ..... | ..... | 05 | 07⅓ | 11⅔ | 309 | 302 | 306 | ..... | 4 | ..... | 7 | ..... | 3 |
| 07 | 02¾ | 10 | ..... | ..... | ..... | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | ..... | 63¼ | 63¼ | 300 | 300 | 231 | ..... | ..... | ..... | ..... | 69 | 69 |
| ..... | ..... | ..... | 19 | 25½ | 30⅞ | 300 | 260 | 260 | ..... | ..... | ..... | 40 | ..... | 40 |
| ..... | ..... | ..... | 07⅓ | ..... | 07½ | 288 | 275 | 150 | ..... | ..... | ..... | 13 | 125 | 138 |
| ..... | ..... | ..... | 06⅔ | 10⅓ | 17⅙ | 280 | 285 | 280 | 5 | ..... | ..... | ..... | 5 | ..... |
| 16 | 12¾ | 30 | ..... | ..... | ..... | 300 | 325 | 300 | 25 | ..... | ..... | ..... | 25 | ..... |
| ..... | ..... | ..... | 20½ | 14⅓ | 31⅔ | 300 | 250 | 275 | ..... | 25 | ..... | 50 | ..... | 25 |
| ..... | ..... | ..... | 33⅓ | 69 | 79⅙ | 300 | 250 | 300 | ..... | 50 | ..... | 50 | ..... | ..... |
| ..... | ..... | ..... | 28 | ..... | ..... | 300 | 270 | ..... | ..... | ..... | ..... | 30 | 270 | 300 |
| ..... | ..... | ..... | 37½ | 37⅓ | 60⅞ | 300 | 300 | 285 | ..... | ..... | ..... | ..... | 15 | 15 |
| ..... | ..... | ..... | 10½ | 26½ | 34⅙ | 302 | 266 | 244 | ..... | ..... | ..... | 36 | 22 | 58 |
| ..... | ..... | ..... | 11⅔ | 01¾ | 19⅓ | 308 | 307 | 289 | ..... | ..... | ..... | 1 | 18 | 19 |
| ..... | 25 | ..... | 27 | ..... | 09⅛ | 301 | 255 | 290 | ..... | 35 | ..... | 46 | ..... | 41 |
| ..... | ..... | ..... | 18 | 34¾ | 47 | 306 | 266 | 230 | ..... | ..... | ..... | 40 | 36 | 76 |
| ..... | ..... | ..... | ..... | ..... | ..... | 300 | 275 | 180 | ..... | ..... | ..... | 25 | 95 | 120 |
| ..... | ..... | ..... | 04 | 04⅛ | 08 | 310 | 258 | 282 | ..... | 24 | ..... | 52 | ..... | 28 |
| ..... | 40 | 40 | ..... | ..... | ..... | 228 | 208 | 137 | ..... | ..... | ..... | 20 | 71 | 91 |
| ..... | ..... | ..... | 03½ | 10 | 13¼ | 204 | 192 | 122 | ..... | ..... | ..... | 12 | 70 | 82 |
| ..... | ..... | ..... | 05½ | ..... | ..... | 278 | 195 | ..... | ..... | ..... | ..... | 83 | 195 | 278 |

*Statistics Relating to Manu-*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Pig and Skelp Iron, | 385 | 250 | 236 | ..... | ..... | ..... | 135 | 14 | 149 |
| Muck Bar and Nails (Iron), | 120 | 70 | 100 | ..... | 30 | ..... | 50 | ..... | 20 |
| Steam Boilers, | 75 | 75 | 75 | ..... | ..... | ..... | ..... | ..... | ..... |
| Iron and Steel, | 7,500 | 5,765 | 5,603 | ..... | ..... | ..... | 1,735 | 162 | 1,897 |
| Iron, | 113 | 120 | 115 | 7 | ..... | 2 | ..... | 5 | ..... |
| Foundry and Machine Shop, | 35 | 30 | 34 | ..... | 4 | ..... | 5 | ..... | |
| Iron Foundry, | 111 | 94 | 68 | ..... | ..... | ..... | 17 | 26 | 43 |
| Rolling Mill, | 270 | 238 | 220 | ..... | ..... | ..... | 32 | 18 | 50 |
| Pig Iron, | 550 | 450 | 357 | ..... | ..... | ..... | 100 | 93 | 193 |
| Pig Iron, Merchant, Bar &c. | 864 | 686 | 760 | ..... | 74 | ..... | 178 | ..... | 104 |
| Locomotives, | 4,035 | 4,313 | 2,153 | 288 | ..... | ..... | ..... | 2,160 | 1,882 |
| Rolling Mill Machinery, | 58 | 57 | 38 | ..... | ..... | ..... | 1 | 19 | 20 |
| Iron and Steel, | 11,200 | 11,800 | 11,400 | 600 | ..... | 200 | ..... | 400 | ..... |
| Steel Rails, Billets, &c., | 3,907 | 1,578 | 1,492 | ..... | ..... | ..... | 1,429 | 86 | 1,515 |
| Steel, | 410 | 218 | 120 | ..... | ..... | ..... | 192 | 98 | 290 |
| Repairing and Building Passenger and Freight Cars, | 2,086 | 2,115 | 2,025 | 29 | ..... | ..... | ..... | 90 | 61 |
| New Locomotives and Repairs, | 3,266 | 3,351 | 3,024 | 85 | ..... | ..... | ..... | 327 | 242 |
| Acid Open Hearth and Steel Plates and Sheets, | 390 | 500 | 531 | 110 | 31 | 141 | ..... | ..... | ..... |
| Boilers, Plate and Sheet Iron Work, | 30 | 30 | 25 | ..... | ..... | ..... | ..... | 5 | 5 |
| Bar Iron, Railroad Spikes, &c., | 45 | 50 | 57 | 5 | 7 | 12 | ..... | ..... | ..... |
| Locomotives, | 867 | 866 | 659 | ..... | ..... | ..... | 1 | 207 | 208 |
| Merchant Iron, | 155 | 121 | 107 | ..... | ..... | ..... | 34 | 14 | 48 |
| Bar Iron, | 240 | 225 | 185 | ..... | ..... | ..... | 15 | 40 | 55 |
| Steel-tired Car Wheels, | 76 | 62 | 36 | ..... | ..... | ..... | 14 | 26 | 40 |
| Drop-Forgings, | 57 | 51 | 47 | ..... | ..... | ..... | 6 | 4 | 10 |
| Stoves, Ranges and Furnaces, | 350 | 400 | 289 | 50 | ..... | ..... | ..... | 111 | 61 |

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| ..... | ..... | ..... | 35 | 05⅔ | 39¼ | 320 | 260 | 173 | ..... | ..... | ..... | 60 | 87 | 147 |
| ..... | 20½ | ..... | 41 | ..... | 16⅔ | 240 | 168 | 200 | ..... | 32 | ..... | 72 | ..... | 40 |
| ..... | ..... | ..... | ..... | ..... | ..... | 300 | 280 | 283 | ..... | 3 | ..... | 20 | ..... | 17 |
| ..... | ..... | ..... | 23 | 02¾ | 25⅓ | 310 | 300 | 239 | ..... | ..... | ..... | 10 | 61 | 71 |
| 06¼ | ..... | 01¾ | ..... | 04¼ | ..... | 305 | 305 | 305 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | 13⅓ | ..... | 14 | ..... | 02⅞ | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 15 | 27⅔ | 38¾ | 300 | 246 | 270 | ..... | 24 | ..... | 54 | ..... | 30 |
| ..... | ..... | ..... | 12 | 07⅔ | 18½ | 261 | 246 | 288 | ..... | 42 | 37 | 15 | ..... | ..... |
| ..... | ..... | ..... | 18 | 20¾ | 35 | 365 | 365 | 265 | ..... | ..... | ..... | ..... | 100 | 100 |
| ..... | 10¾ | ..... | 20½ | ..... | 12⅞ | 308 | 221 | 239 | ..... | 18 | ..... | 87 | ..... | 69 |
| 07⅛ | ..... | ..... | ..... | 50⅛ | 46⅔ | 309 | 306 | 304 | ..... | ..... | ..... | 3 | 2 | 5 |
| ..... | ..... | ..... | 01¾ | 33⅓ | 34⅓ | 310 | 307 | 200 | ..... | ..... | ..... | 3 | 107 | 110 |
| 05½ | ..... | 01¾ | ..... | 03½ | ..... | 365 | 365 | 365 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 47½ | 05½ | 50½ | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 46¾ | 45 | 70¾ | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 01½ | ..... | ..... | ..... | 04¼ | 02⅞ | 305 | 289 | 259 | ..... | ..... | ..... | 16 | 30 | 46 |
| 02½ | ..... | ..... | ..... | 09⅔ | 07¾ | 302 | 268 | 239 | ..... | ..... | ..... | 34 | 29 | 63 |
| 28 | 06¼ | 36⅛ | ..... | ..... | ..... | 294 | 279 | 288 | ..... | 9 | ..... | 15 | ..... | 6 |
| ..... | ..... | ..... | ..... | 16⅔ | 16⅔ | 2.2 | 308 | 304 | 76 | ..... | 72 | ..... | 4 | ..... |
| 11 | 14 | 26⅔ | ..... | ..... | ..... | 290 | 257 | 270 | ..... | 13 | ..... | 33 | ..... | 20 |
| ..... | ..... | ..... | 001 | 24 | 24⅛ | 303 | 257 | 254 | ..... | ..... | ..... | 46 | 3 | 49 |
| ..... | ..... | ..... | 22 | 11½ | 31 | 292 | 162 | 150 | ..... | ..... | ..... | 130 | 12 | 142 |
| ..... | ..... | ..... | 06 | 17⅞ | 23 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 18½ | 42 | 52⅔ | 289 | 232 | 216 | ..... | ..... | ..... | 57 | 16 | 73 |
| ..... | ..... | ..... | 10½ | 07¾ | 17⅞ | 294 | 234 | 292 | ..... | 58 | ..... | 60 | ..... | 2 |
| 14⅓ | ..... | ..... | ..... | 27¾ | 17½ | 275 | 275 | 208 | ..... | ..... | ..... | ..... | 63 | 63 |

*Statistics Relating to Manu-*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Car Wheels, Car Axles and Cars, | 478 | 84 | 95 | ..... | 11 | ..... | 394 | ..... | 383 |
| Locomotives, Stationery Engines, Boilers, &c., | 801 | 650 | 515 | ..... | ..... | ..... | 151 | 135 | 286 |
| Merchant Iron, | 1,800 | 1,475 | 919 | ..... | ..... | ..... | 325 | 556 | 881 |
| Iron Works, | 250 | 200 | 175 | ..... | ..... | ..... | 50 | 25 | 75 |
| Iron Foundry, | 380 | 370 | 350 | ..... | ..... | ..... | 10 | 20 | 30 |
| Tools, | 228 | 215 | 232 | ..... | 17 | 4 | 13 | ..... | ..... |
| Car Wheels, | 208 | 188 | 157 | ..... | ..... | ..... | 20 | 31 | 51 |
| Stoves, Heaters, Ranges, &c., | 162 | 193 | 178 | 31 | ..... | 16 | ..... | 15 | ..... |
| Power Transmitting Machinery, | 300 | 290 | 207 | ..... | ..... | ..... | 10 | 83 | 93 |
| Boiler and Tank Plates, | 87 | 80 | 42 | ..... | ..... | ..... | 7 | 38 | 45 |
| Foundry and Machine Shop, | 48 | 36 | 26 | ..... | ..... | ..... | 12 | 10 | 22 |
| Machine Tools and Steam Hammers, | 690 | 668 | 408 | ..... | ..... | ..... | 22 | 260 | 282 |
| Pig Iron, | 526 | 394 | 309 | ..... | ..... | ..... | 132 | 85 | 217 |
| Foundry and Machinery, | 320 | 275 | 336 | ..... | 61 | ..... | 45 | ..... | 16 |
| Pig Iron, Cut Nails, &c., | 520 | 475 | 430 | ..... | ..... | ..... | 45 | 45 | 90 |
| Iron and Steel Nails, &c., | 1,576 | 1,065 | 595 | ..... | ..... | ..... | 511 | 470 | 981 |
| Bar Iron and Forgings, | 119 | 109 | 75 | ..... | ..... | ..... | 10 | 34 | 44 |
| Stoves, Ranges, &c., | 165 | 193 | 194 | 28 | 1 | 29 | ..... | ..... | ..... |
| Boilers, | 25 | 32 | 37 | 7 | 5 | 12 | ..... | ..... | ..... |
| Steam Engines and Boilers, | 53 | 42 | 30 | ..... | ..... | ..... | 11 | 12 | 23 |
| Saws, Tools, &c., | 1,150 | 1,000 | 1,000 | ..... | ..... | ..... | 150 | ..... | 150 |
| Files, | 225 | 200 | 200 | ..... | ..... | ..... | 25 | ..... | 25 |
| Cast Iron Pipe, | 155 | 163 | 168 | 8 | 5 | 13 | ..... | ..... | ..... |
| Car Wheels, &c., | 309 | 232 | 120 | ..... | ..... | ..... | 77 | 112 | 189 |
| Foundry, | 76 | 96 | 63 | 20 | ..... | ..... | ..... | 33 | 13 |
| Merchant Bar Iron, | 140 | 140 | 140 | ..... | ..... | ..... | ..... | ..... | ..... |
| Railroad Equipment, &c., | 385 | 325 | 340 | ..... | 15 | ..... | 60 | ..... | 45 |
| Wrought Iron Pipe, | 40 | 35 | 19 | ..... | ..... | ..... | 5 | 16 | 21 |

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| ..... | 13 | ..... | 82½ | ..... | 81½ | 305 | 310 | 248 | 5 | ..... | ..... | ..... | 62 | 57 |
| ..... | ..... | ..... | 18¾ | 20¾ | 35¾ | 305 | 305 | 305 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 18 | 37¾ | 49 | 310 | 310 | 310 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 20 | 12½ | 30 | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 02⅓ | 05⅓ | 08 | 302 | 290 | 303 | ..... | 13 | 1 | 12 | ..... | ..... |
| ..... | 07⅞ | 01¾ | 05⅔ | ..... | ..... | 300 | 268 | 220 | ..... | ..... | ..... | 32 | 48 | 80 |
| ..... | ..... | ..... | 09½ | 16½ | 24½ | 273 | 237 | 288 | ..... | 51 | 15 | 36 | ..... | ..... |
| 19 | ..... | 10 | ..... | 07¾ | ..... | 300 | 300 | 290 | ..... | ..... | ..... | ..... | 10 | 10 |
| ..... | ..... | ..... | 03⅓ | 28 | 31 | 304 | 288 | 288 | ..... | ..... | ..... | 16 | ..... | 16 |
| ..... | ..... | ..... | 08 | 47½ | 51¾ | 487 | 348 | 190 | ..... | ..... | ..... | 139 | 58 | 197 |
| ..... | ..... | ..... | 25 | 27⅔ | 46 | 304 | 306 | 299 | 2 | ..... | ..... | ..... | 7 | 5 |
| ..... | ..... | ..... | 03¼ | 39⅓ | 40⅞ | 308 | 305 | 306 | ..... | 1 | ..... | 3 | ..... | 2 |
| ..... | ..... | ..... | 25 | 21⅔ | 41⅔ | 365 | 365 | 365 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | 22¼ | ..... | 14 | ..... | 50 | 310 | 305 | 310 | ..... | 5 | ..... | 5 | ..... | ..... |
| ..... | ..... | ..... | 08⅝ | 09½ | 17⅓ | 243 | 231 | 115 | ..... | ..... | ..... | 12 | 116 | 128 |
| ..... | ..... | ..... | 32½ | 44⅓ | 62½ | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 08½ | 31⅓ | 37 | 303 | 245 | 225 | ..... | ..... | ..... | 58 | 20 | 78 |
| 17 | 005⅛ | 17½ | ..... | ..... | ..... | 286 | 260 | 280 | ..... | 20 | ..... | 26 | ..... | 6 |
| 28 | 15⅔ | 48 | ..... | ..... | ..... | 305 | 305 | 305 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 20¾ | 28½ | 43⅓ | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 13 | ..... | 13 | 300 | 275 | 291 | ..... | 19 | ..... | 25 | ..... | 6 |
| ..... | ..... | ..... | 11⅛ | ..... | 11⅛ | 300 | 262 | 281 | ..... | 19 | ..... | 38 | ..... | 19 |
| 05⅛ | 03⅔ | 08⅔ | ..... | ..... | ..... | 275 | 297 | 289 | 22 | ..... | 14 | ..... | 8 | ..... |
| ..... | ..... | ..... | 24⅞ | 48⅔ | 63 | 313 | 313 | 313 | ..... | ..... | ..... | ..... | ..... | ..... |
| 26½ | ..... | ..... | ..... | 34⅓ | 17 | 309 | 309 | 307 | ..... | ..... | ..... | ..... | 2 | 2 |
| ..... | ..... | ..... | ..... | ..... | ..... | 281 | 231 | 223 | ..... | ..... | ..... | 50 | 8 | 58 |
| ..... | 04⅔ | ..... | 15½ | ..... | 11⅔ | 263 | 206 | 141 | ..... | ..... | ..... | 57 | 65 | 122 |
| ..... | ..... | ..... | 12½ | 45⅔ | 52½ | 171 | 151 | 74 | ..... | ..... | ..... | 20 | 77 | 97 |

*Statistics Relating to Manu-*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Blast Furnace,* | 270 | 211 | 231 | ..... | 20 | ..... | 59 | ..... | 39 |
| Sheet and Plate Iron and Steel, | 280 | 270 | 210 | ..... | ..... | ..... | 10 | 60 | 70 |
| Cut Nails, | 470 | 460 | 400 | ..... | ..... | ..... | 10 | 60 | 70 |
| Foundry and Machine Work, | 75 | 65 | 64 | ..... | ..... | ..... | 10 | 1 | 11 |
| Chain Works, &c., | 110 | 120 | 115 | 10 | ..... | 5 | ..... | 5 | ..... |
| Metal and Wood, | 100 | 90 | 45 | ..... | ..... | ..... | 10 | 45 | 55 |
| Electric Street Cars, | 97 | 140 | 39 | 43 | ..... | ..... | ..... | 101 | 58 |
| Tacks and Nails, | 23 | 25 | 27 | 2 | 2 | 4 | ..... | ..... | ..... |
| Sheet Steel, Plates, &c., | 229 | 188 | 217 | ..... | 29 | ..... | 41 | ..... | 12 |
| Rails, Bars, Splices, &c., | 90 | 110 | 26 | 20 | ..... | ..... | ..... | 84 | 64 |
| Iron and Steel Sheets, | 272 | 252 | 325 | ..... | 73 | 53 | 20 | ..... | ..... |
| Street Railway Rails, Switches, &c., | 1,204 | 1,181 | 1,202 | ..... | 21 | ..... | 23 | ..... | 2 |
| Merchant Bar Iron, &c., | 97 | 106 | 90 | 9 | ..... | ..... | ..... | 16 | 7 |
| Ship Building, | 440 | 583 | 395 | 143 | ..... | ..... | ..... | 188 | 45 |
| Iron and Nails, | 156 | 154 | 140 | ..... | ..... | ..... | 2 | 14 | 16 |
| Foundry and Machine Shop, &c., | 221 | 281 | 144 | 60 | ..... | ..... | ..... | 137 | 77 |
| Pig Iron, | 66 | 65 | 62 | ..... | ..... | ..... | 1 | 3 | 4 |
| Steel Castings, | 102 | 106 | 101 | 4 | ..... | ..... | ..... | 5 | 1 |
| Wire Nails, | 700 | 760 | 765 | 60 | 5 | 65 | ..... | ..... | ..... |
| Nails, | 272 | 178 | 134 | ..... | ..... | ..... | 94 | 44 | 138 |
| Blast Furnaces, | 250 | 190 | 209 | ..... | 19 | ..... | 60 | ..... | 41 |
| Steeel and Plate Iron, &c., | 455 | 350 | 305 | ..... | ..... | ..... | 105 | 45 | 150 |
| Iron and Steel Pipe, &c., | 291 | 313 | 276 | 22 | ..... | ..... | ..... | 37 | 15 |
| Bronze and Brass Castings, | 25 | 22 | 16 | ..... | ..... | ..... | 3 | 6 | 9 |
| Steam Engines, Pumping Engines, &c., | 450 | 500 | 457 | 50 | ..... | 7 | ..... | 43 | ..... |
| Iron and Steel Bridge Material, | 563 | 416 | 231 | ..... | ..... | ..... | 147 | 185 | 332 |

*For eleven months in 1894.

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| ..... | 09½ | ..... | 22 | ..... | 14½ | ..... | ..... | 304 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 03⅔ | 22¼ | 25 | 323 | 316 | 300 | ..... | ..... | ..... | 7 | 16 | 23 |
| ..... | ..... | ..... | 02⅛ | 13½ | 15 | 265 | 245 | 228 | ..... | ..... | ..... | 20 | 17 | 37 |
| ..... | ..... | ..... | 13⅓ | 01½ | 14⅝ | 302 | 303 | 308 | 1 | 5 | 6 | ..... | ..... | ..... |
| 09 | ..... | 04½ | ..... | 04¼ | ..... | 281 | 212 | 297 | ..... | 85 | 16 | 69 | ..... | ..... |
| ..... | ..... | ..... | 10 | 50 | 55 | 298 | 265 | 195 | ..... | ..... | ..... | 33 | 70 | 103 |
| 44⅓ | ..... | ..... | ..... | 72⅛ | 59¾ | 310 | 310 | 305 | ..... | ..... | ..... | ..... | 5 | 5 |
| 08⅔ | 08 | 17⅓ | ..... | ..... | ..... | 278 | 260 | 290 | ..... | 30 | 12 | 18 | ..... | ..... |
| ..... | 15⅓ | ..... | 17⅞ | ..... | 05¼ | 286 | 280 | 276 | ..... | ..... | ..... | 6 | 4 | 10 |
| 22¼ | ..... | ..... | ..... | 76⅓ | 71 | 217 | 264 | 72 | 47 | ..... | ..... | ..... | 192 | 145 |
| ..... | 29 | 19½ | 07½ | ..... | ..... | 291 | 258 | 198 | ..... | ..... | ..... | 33 | 60 | 93 |
| ..... | 01¾ | ..... | 01⅞ | ..... | 001¾ | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| 09¼ | ..... | ..... | ..... | 15 | 07¼ | 120 | 60 | 300 | ..... | 240 | 180 | 60 | ..... | ..... |
| 32½ | ..... | ..... | ..... | 32⅓ | 10¼ | 310 | 310 | 310 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 01¼ | 09⅛ | 10¼ | 298 | 268 | 255 | ..... | ..... | ..... | 30 | 13 | 43 |
| 27⅛ | ..... | ..... | ..... | 49 | 34¾ | 308 | 304 | 309 | ..... | 5 | 1 | 4 | ..... | ..... |
| ..... | ..... | ..... | 01½ | 04⅔ | 06⅔ | 329 | 357 | 335 | 28 | ..... | 6 | ..... | 22 | ..... |
| 03⅞ | ..... | ..... | ..... | 04⅔ | 01 | 310 | 310 | 310 | ..... | ..... | ..... | ..... | ..... | ..... |
| 08½ | 006½ | 09⅓ | ..... | ..... | ..... | 217 | 223 | 256 | 6 | 33 | 39 | ..... | ..... | ..... |
| ..... | ..... | ..... | 34½ | 24¾ | 51⅛ | 293 | 234 | 229 | ..... | ..... | ..... | 59 | 5 | 64 |
| ..... | 10 | ..... | 24 | ..... | 16⅓ | 365 | 365 | 365 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 23 | 13 | 33⅓ | 275 | 198 | 237 | ..... | 39 | ..... | 57 | ..... | 18 |
| 07½ | ..... | ..... | ..... | 11¾ | 05⅛ | 264 | 288 | 215 | 24 | ..... | ..... | ..... | 73 | 49 |
| ..... | ..... | ..... | 12 | 27¼ | 36 | 300 | 300 | 250 | ..... | ..... | ..... | ..... | 50 | 50 |
| 11⅛ | ..... | 01½ | ..... | 08⅔ | ..... | 305 | 305 | 305 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 33½ | 45⅛ | 59¼ | 310 | 310 | 307 | ..... | ..... | ..... | ..... | 3 | 3 |

*Statistics Relating to Manu-*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Iron and Steel Cut Nails, ... | 375 | 375 | 375 | ..... | ..... | ..... | ..... | ..... | ..... |
| Cook Stoves, Ranges, &c.,... | 70 | 75 | 75 | 5 | ..... | 5 | ..... | ..... | ..... |
| Iron and Steel Boilers, &c.,.. | 225 | 300 | 300 | 75 | ..... | 75 | ..... | ..... | ..... |
| Pig Iron, ..... | 401 | 304 | 131 | ..... | ..... | ..... | 97 | 173 | 270 |
| Iron and Steel Plates, Tanks, &c., ..... | 278 | 279 | 305 | 1 | 6 | 7 | ..... | ..... | ..... |
| Iron, ..... | 23 | 30 | 8 | 7 | ..... | ..... | ..... | 22 | 15 |
| Iron Foundry, ..... | 60 | 60 | 55 | ..... | ..... | ..... | ..... | 5 | 5 |
| Boiler, Tube, Skelp Iron, Iron and Steel, ..... | 236 | 222 | 178 | ..... | ..... | ..... | 14 | 44 | 58 |
| Iron and Steel, ..... | 96 | 83 | 62 | ..... | ..... | ..... | 13 | 21 | 34 |
| Founders, Machinists and Car Builders, ..... | 60 | 60 | 47 | ..... | ..... | ..... | ..... | 13 | 13 |
| Iron Works, ..... | 645 | 705 | 735 | 60 | 30 | 90 | ..... | ..... | ..... |
| Boiler and Wrought Iron Works, ..... | 67 | 60 | 59 | ..... | ..... | ..... | 7 | 1 | 8 |
| Plate and Tube Iron, ..... | 200 | 173 | 154 | ..... | ..... | ..... | 27 | 19 | 46 |
| Welded Iron Chains, &c., .. | 95 | 75 | 65 | ..... | ..... | ..... | 20 | 20 | 40 |
| Rolling Mill, ..... | 265 | 318 | 298 | 53 | ..... | 33 | ..... | 20 | ..... |
| Locomotives and Machinery,.. | 701 | 736 | 417 | 35 | ..... | ..... | ..... | 319 | 284 |
| Iron and Steel Plates, .... | 250 | 242 | 225 | ..... | ..... | ..... | 8 | 17 | 25 |
| Bessemer and Open Hearth Steel, ..... | 4,202 | 4,008 | 3,655 | ..... | ..... | ..... | 194 | 353 | 547 |
| Horse and Mule Shoes, ..... | 110 | 130 | 140 | 20 | 10 | 30 | ..... | ..... | ..... |
| Castings ..... | 80 | 80 | 75 | ..... | ..... | ..... | ..... | 5 | 5 |
| Zinc and Iron, ..... | 384 | 385 | 360 | 1 | ..... | ..... | ..... | 25 | 24 |
| Iron and Brass Foundry, &c.. | 220 | 150 | 95 | ..... | ..... | ..... | 70 | 55 | 125 |
| Iron Founders, ..... | 110 | 60 | 20 | ..... | ..... | ..... | 50 | 40 | 90 |
| Total, ..... | 103,471 | 92,890 | 79,829 | ..... | ..... | ..... | 10,581 | 13,061 | 23,642 |

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| ..... | ..... | ..... | ..... | ..... | ..... | 246 | 268 | 182 | 22 | ..... | ..... | ..... | 86 | 64 |
| 07⅛ | ..... | 07¼ | ..... | ..... | ..... | 286 | 210 | 129 | ..... | ..... | ..... | 76 | 81 | 157 |
| 33⅓ | ..... | 33⅓ | ..... | ..... | ..... | 275 | 200 | 200 | ..... | ..... | ..... | 75 | ..... | 75 |
| ..... | ..... | ..... | 24¼ | 57⅔ | 67½ | 304 | 298 | 365 | ..... | 67 | 61 | 6 | ..... | ..... |
| 003⅓ | 02¼ | 02½ | ..... | ..... | ..... | 255 | 179 | 169 | ..... | ..... | ..... | 76 | 10 | 86 |
| 30½ | ..... | ..... | ..... | 73⅓ | 65¼ | 304 | 300 | 305 | ..... | 5 | 1 | 4 | ..... | ..... |
| ..... | ..... | ..... | ..... | 08⅓ | 08⅓ | 290 | 270 | 255 | ..... | ..... | ..... | 20 | 15 | 35 |
| ..... | ..... | ..... | 05⅞ | 20 | 24½ | 505 | 451 | 338 | ..... | ..... | ..... | 54 | 113 | 167 |
| ..... | ..... | ..... | 13½ | 25¼ | 35½ | 290 | 230 | 220 | ..... | ..... | ..... | 60 | 10 | 70 |
| ..... | ..... | ..... | ..... | 21⅔ | 21⅔ | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| 09⅓ | 04¼ | 14 | ..... | ..... | ..... | 247 | 285 | 300 | 38 | 15 | 53 | ..... | ..... | ..... |
| ..... | ..... | ..... | 10½ | 01⅔ | 12 | 309 | 308 | 306 | ..... | ..... | ..... | 1 | 2 | 3 |
| ..... | ..... | ..... | 13½ | 11 | 23 | 299 | 245 | 163 | ..... | ..... | ..... | 54 | 82 | 136 |
| ..... | ..... | ..... | 21 | 26¾ | 42⅛ | 290 | 240 | 225 | ..... | ..... | ..... | 50 | 15 | 65 |
| 20 | ..... | 12½ | ..... | 06⅓ | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 05 | ..... | ..... | ..... | 43¾ | 40⅔ | 306 | 266 | 200 | ..... | ..... | ..... | 40 | 66 | 106 |
| ..... | ..... | ..... | 03⅛ | 07 | 10 | 309 | 255 | 295 | ..... | 40 | ..... | 54 | ..... | 14 |
| ..... | ..... | ..... | 04⅝ | 08⅜ | 13 | 283 | 268 | 270 | ..... | 2 | ..... | 15 | ..... | 13 |
| 18¼ | 07¾ | 27¼ | ..... | ..... | ..... | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | ..... | 06¼ | 06¼ | 300 | 300 | 250 | ..... | ..... | ..... | ..... | 50 | 50 |
| 002⅝ | ..... | ..... | ..... | 06½ | 06¼ | 365 | 308 | 300 | ..... | ..... | ..... | 57 | 8 | 65 |
| ..... | ..... | ..... | 31⅞ | 36⅔ | 57 | 310 | 300 | 305 | ..... | 5 | ..... | 10 | ..... | 5 |
| ..... | ..... | ..... | 45½ | 66⅔ | 45 | 300 | 200 | 200 | ..... | ..... | ..... | 100 | ..... | 100 |
| ..... | ..... | ..... | 10¼ | 14 | 22¾ | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| *Carpets.* | | | | | | | | | |
| Carpets, | 150 | 120 | 100 | ..... | ..... | ..... | 30 | 20 | 50 |
| Carpets, | 180 | 160 | 180 | ..... | 20 | ..... | 20 | ..... | ..... |
| Carpets, | 102 | 80 | 95 | ..... | 15 | ..... | 22 | ..... | 7 |
| Carpets, | 175 | 100 | 75 | ..... | ..... | ..... | 75 | 25 | 100 |
| Carpets, | 140 | 100 | 105 | ..... | 5 | ..... | 40 | ..... | 35 |
| Carpets, | 300 | 200 | 300 | ..... | 100 | ..... | 100 | ..... | ..... |
| Carpets, | 400 | 400 | 400 | ..... | ..... | ..... | ..... | ..... | ..... |
| Carpets, | 22 | 22 | 22 | ..... | ..... | ..... | ..... | ..... | ..... |
| Carpets, | 225 | 200 | 190 | ..... | ..... | ..... | 25 | 10 | 35 |
| Carpets, | 175 | 150 | 160 | ..... | 10 | ..... | 25 | ..... | 15 |
| Carpets, | 250 | 250 | 250 | ..... | ..... | ..... | ..... | ..... | ..... |
| Carpets, | 110 | 110 | 110 | ..... | ..... | ..... | ..... | ..... | ..... |
| Carpets, | 350 | 350 | 350 | ..... | ..... | ..... | ..... | ..... | ..... |
| Carpets,* | 525 | 402 | ..... | ..... | ..... | ..... | 123 | 402 | 525 |
| Carpets, | 150 | 150 | 150 | ..... | ..... | ..... | ..... | ..... | ..... |
| Carpets, | 262 | 232 | 224 | ..... | ..... | ..... | 30 | 8 | 38 |
| Carpets, | 67 | 75 | 55 | 8 | ..... | ..... | ..... | 20 | 12 |
| Carpets, | 60 | 40 | 35 | ..... | ..... | ..... | 20 | 5 | 25 |
| Carpets,* | 50 | 25 | ..... | ..... | ..... | ..... | 25 | 25 | 50 |
| Carpets, | 52 | 30 | 32 | ..... | 2 | ..... | 22 | ..... | 20 |
| Carpets, | 176 | 236 | 208 | 60 | ..... | 32 | ..... | 28 | ..... |
| Carpets, | 40 | 60 | 72 | 20 | 12 | 32 | ..... | ..... | ..... |
| Carpets, | 300 | 200 | 150 | ..... | ..... | ..... | 100 | 50 | 150 |
| Carpets, | 142 | 120 | 114 | ..... | ..... | ..... | 22 | 6 | 28 |
| Carpets, | 110 | 110 | 71 | ..... | ..... | ..... | ..... | 49 | 49 |
| Carpets, | 125 | 175 | 175 | 50 | ..... | 50 | ..... | ..... | ..... |
| Total, | 4,648 | 4,097 | 3,623 | ..... | ..... | ..... | 551 | 474 | 1,025 |

*Out of business in 1894.

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| ..... | ..... | ..... | 20 | 16⅔ | 33⅓ | 306 | 230 | 194 | ..... | ..... | ..... | 76 | 36 | 112 |
| ..... | 12½ | ..... | 11 | ..... | ..... | 310 | 270 | 270 | ..... | ..... | ..... | 40 | ..... | 40 |
| ..... | 18¾ | ..... | 21½ | ..... | 07 | 308 | 260 | 308 | ..... | 48 | ..... | 48 | ..... | ..... |
| ..... | ..... | ..... | 43 | 25 | 57⅛ | 300 | 270 | 200 | ..... | ..... | ..... | 30 | 70 | 100 |
| ..... | 05 | ..... | 28 | ..... | 25 | 310 | 295 | 300 | ..... | 5 | ..... | 15 | ..... | 10 |
| ..... | 33½ | ..... | 33½ | ..... | ..... | 300 | 170 | 25 | ..... | 80 | ..... | 130 | ..... | 50 |
| ..... | ..... | ..... | ..... | ..... | ..... | 307 | 214 | 305 | ..... | 91 | ..... | 93 | ..... | 2 |
| ..... | ..... | ..... | ..... | ..... | ..... | 288 | 230 | 230 | ..... | ..... | ..... | 58 | ..... | 58 |
| ..... | ..... | ..... | 11 | 05 | 15½ | 300 | 200 | 288 | ..... | 88 | ..... | 100 | ..... | 12 |
| ..... | 06⅔ | ..... | 14⅓ | ..... | 08½ | 300 | 200 | 200 | ..... | ..... | ..... | 100 | ..... | 100 |
| ..... | ..... | ..... | ..... | ..... | ..... | 300 | 250 | 275 | ..... | 25 | ..... | 50 | ..... | 25 |
| ..... | ..... | ..... | ..... | ..... | ..... | 300 | 228 | 252 | ..... | 24 | ..... | 72 | ..... | 48 |
| ..... | ..... | ..... | ..... | ..... | ..... | 300 | 245 | 280 | ..... | 35 | ..... | 55 | ..... | 20 |
| ..... | ..... | ..... | 23½ | ..... | ..... | 290 | 250 | ..... | ..... | ..... | ..... | 40 | 250 | 290 |
| ..... | ..... | ..... | ..... | ..... | ..... | 300 | 240 | *..... | ..... | ..... | ..... | 60 | ..... | ..... |
| ..... | ..... | ..... | 10½ | 03½ | 14½ | 300 | 267 | 269 | ..... | 2 | ..... | 33 | ..... | 31 |
| 12 | ..... | ..... | ..... | 26⅔ | 18 | 313 | 313 | 313 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 33⅓ | 12½ | 41⅔ | 300 | 200 | 200 | ..... | ..... | ..... | 100 | ..... | 100 |
| ..... | ..... | ..... | 50 | ..... | ..... | 300 | 240 | ..... | ..... | ..... | ..... | 60 | 240 | 300 |
| ..... | 06⅔ | ..... | 42⅓ | ..... | 38¾ | 302 | 210 | 220 | ..... | 10 | ..... | 92 | ..... | 82 |
| 34 | ..... | 18 | ..... | 11¾ | ..... | 306 | 229 | 261 | ..... | 32 | ..... | 77 | ..... | 45 |
| 50 | 20 | 80 | ..... | ..... | ..... | 305 | 305 | 305 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 33⅓ | 25 | 50 | 296 | 240 | 201 | ..... | ..... | ..... | 56 | 39 | 95 |
| ..... | ..... | ..... | 15½ | 05 | 19⅓ | 307 | 274 | 306 | ..... | 32 | ..... | 33 | ..... | 1 |
| ..... | ..... | ..... | ..... | 44⅔ | 44⅔ | 281 | 196 | 225 | ..... | 29 | ..... | 85 | ..... | 56 |
| 40 | ..... | 40 | ..... | ..... | ..... | 230 | 135 | 250 | ..... | 115 | 20 | 95 | ..... | ..... |
| ..... | ..... | ..... | 11¾ | 11½ | 22⅙ | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

*Number of days in operation in 1894 not given.

*Statistics Relating to Manu*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| *Hosiery.* | | | | | | | | | |
| Hosiery,* | 325 | 325 | ..... | ..... | ..... | ..... | ..... | 325 | 325 |
| Hosiery, | 260 | 200 | 223 | ..... | 23 | ..... | 60 | ..... | 37 |
| Hosiery, | 200 | 150 | 250 | ..... | 100 | 50 | 50 | ..... | ..... |
| Hosiery, | 50 | 30 | 60 | ..... | 30 | 10 | 20 | ..... | ..... |
| Hosiery, | 69 | 66 | 90 | ..... | 24 | 21 | 3 | ..... | ..... |
| Hosiery, | 35 | 30 | 27 | ..... | ..... | ..... | 5 | 3 | 8 |
| Hosiery, | 300 | 240 | 250 | ..... | 10 | ..... | 60 | ..... | 50 |
| Hosiery, | 330 | 350 | 371 | 20 | 21 | 41 | ..... | ..... | ..... |
| Hosiery, | 42 | 81 | 117 | 39 | 36 | 75 | ..... | ..... | ..... |
| Hosiery, | 175 | 75 | 125 | ..... | 50 | ..... | 100 | ..... | 50 |
| Total, | 1,786 | 1,547 | 1,513 | ..... | ..... | ..... | 239 | 34 | 273 |
| *Wool.* | | | | | | | | | |
| Woolen Goods, | 294 | 286 | 296 | ..... | 10 | 2 | 8 | ..... | ..... |
| Woolen Goods, | 40 | 38 | 38 | ..... | ..... | ..... | 2 | ..... | 2 |
| Woolen Goods, | 68 | 68 | 70 | ..... | ..... | ..... | ..... | 2 | 2 |
| Woolen Goods, | 163 | 150 | 139 | ..... | ..... | ..... | 13 | 11 | 24 |
| Woolen Goods, | 700 | 200 | 480 | ..... | 280 | ..... | 500 | ..... | 220 |
| Woolen Goods, | 275 | 247 | 228 | ..... | ..... | ..... | 28 | 19 | 47 |
| Woolen Goods, | 260 | 260 | 150 | ..... | ..... | ..... | ..... | 110 | 110 |
| Woolen Cloth, | 100 | 100 | 100 | ..... | ..... | ..... | ..... | ..... | ..... |
| Woolen Goods, | 95 | 175 | 150 | 80 | ..... | 55 | ..... | 25 | ..... |
| Woolen Yarns, | 94 | 160 | 175 | 66 | 15 | 81 | ..... | ..... | ..... |
| Worsted Yarns, | 127 | 108 | 112 | ..... | 4 | ..... | 19 | ..... | 15 |
| Worsted Goods, | 105 | 62 | 86 | ..... | 24 | ..... | 43 | ..... | 19 |
| Woolen Yarns, | 100 | 100 | 100 | ..... | ..... | ..... | ..... | ..... | ..... |
| Woolen Yarns, | 90 | 60 | 42 | ..... | ..... | ..... | 30 | 18 | 48 |
| Woolen Goods, | 250 | 250 | 250 | ..... | ..... | ..... | ..... | ..... | ..... |
| Woolen Yarns, | 55 | 50 | 20 | ..... | ..... | ..... | 5 | 30 | 35 |

*Plant not in operation in 1894.

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| ..... | ..... | ..... | ..... | ..... | ..... | 307 | 275 | ..... | ..... | ..... | ..... | 32 | 275 | 307 |
| ..... | 10½ | ..... | .23 | ..... | 13½ | 308 | 274 | 274 | ..... | ..... | ..... | 32 | ..... | 32 |
| ..... | 40 | 20 | .25 | ..... | ..... | 250 | 200 | 300 | ..... | 100 | 50 | 50 | ..... | ..... |
| ..... | 50 | 16⅔ | .40 | ..... | ..... | 250 | 250 | 250 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | 25⅝ | 23⅓ | .04⅓ | ..... | ..... | 305 | 225 | 305 | ..... | 80 | ..... | 80 | ..... | ..... |
| ..... | ..... | ..... | .14⅛ | 10 | 22⅞ | 286 | 210 | 150 | ..... | ..... | ..... | 76 | 60 | 126 |
| ..... | .04 | ..... | .20 | ..... | 16⅔ | 305 | 242 | 300 | ..... | 58 | ..... | 63 | ..... | 5 |
| .06 | .06 | 11 | ..... | ..... | ..... | 308 | 308 | 304 | ..... | ..... | ..... | ..... | 4 | 4 |
| 55¾ | 44⅔ | 178 | ..... | ..... | ..... | 249 | 230 | 241 | ..... | 11 | ..... | 19 | ..... | 8 |
| ..... | 40 | ..... | 57⅛ | ..... | 28½ | 300 | 200 | 300 | ..... | 100 | ..... | 100 | ..... | ..... |
| ..... | ..... | ..... | 13¼ | 02¼ | 15⅓ | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | 03½ | .007 | 02⅔ | ..... | ..... | 294 | 250 | 260 | ..... | 10 | ..... | 44 | ..... | 34 |
| ..... | ..... | ..... | .05 | ..... | .05 | 300 | 273 | 280 | ..... | 7 | ..... | 27 | ..... | 20 |
| ..... | ..... | ..... | ..... | .03 | .03 | 300 | 260 | 303 | ..... | 43 | 3 | 40 | ..... | ..... |
| ..... | ..... | ..... | .08 | 07⅓ | 14⅔ | 298 | 252 | 249 | ..... | ..... | ..... | 46 | 3 | 49 |
| ..... | 140 | ..... | 71½ | ..... | 31½ | 300 | 185 | 300 | ..... | 115 | ..... | 115 | ..... | ..... |
| ..... | ..... | ..... | 10¼ | 07⅞ | 17⅛ | 304 | 254 | 226 | ..... | ..... | ..... | 50 | 28 | 78 |
| ..... | ..... | ..... | ..... | 42⅓ | 42⅓ | 300 | 150 | 284 | ..... | 134 | ..... | 150 | ..... | 16 |
| ..... | ..... | ..... | ..... | ..... | ..... | 300 | 200 | 225 | ..... | 25 | ..... | 100 | ..... | 75 |
| .84 | ..... | 58 | ..... | 14¼ | ..... | 309 | 225 | 264 | ..... | 39 | ..... | 84 | ..... | 45 |
| 70¼ | 09¾ | 86⅛ | ..... | ..... | ..... | 275 | 275 | 275 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | 03¾ | ..... | .15 | ..... | 11¾ | 298 | 187 | 302 | ..... | 115 | 4 | 111 | ..... | ..... |
| ..... | 38⅔ | ..... | .41 | ..... | 18 | 300 | 210 | 196 | ..... | ..... | ..... | 90 | 14 | 104 |
| ..... | ..... | ..... | ..... | ..... | ..... | 298 | 234 | 292 | ..... | 58 | ..... | 64 | ..... | 6 |
| ..... | ..... | ..... | 33⅓ | 30 | 53⅓ | 300 | 200 | 200 | ..... | ..... | ..... | 100 | ..... | 100 |
| ..... | ..... | ..... | ..... | ..... | ..... | 300 | 212 | 255 | ..... | 43 | ..... | 88 | ..... | 45 |
| ..... | ..... | ..... | 09⅛ | 60 | 63 | 300 | 175 | 250 | ..... | 75 | ..... | 125 | ..... | 50 |

*Statistics Relating to Manu-*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Woolen Goods, | 200 | 175 | 150 | ..... | ..... | ..... | 25 | 25 | 50 |
| Woolen Yarns, | 90 | 70 | 60 | ..... | ..... | ..... | 20 | 10 | 30 |
| Woolen Yarns,* | 150 | 150 | ..... | ..... | ..... | ..... | ..... | 150 | 150 |
| Woolen Yarns, | 67 | 137 | 123 | 70 | ..... | 56 | ..... | 14 | ..... |
| Woolen Yarns,* | 150 | 50 | ..... | ..... | ..... | ..... | 100 | 50 | 150 |
| Worsted Yarns, | 475 | 230 | ..... | ..... | ..... | ..... | 245 | ..... | ..... |
| Worsted and Woolen Goods, | 256 | 224 | 175 | ..... | ..... | ..... | 32 | 49 | 81 |
| Woolen Goods, | 753 | 680 | 617 | ..... | ..... | ..... | 73 | 63 | 136 |
| Woolen Goods, | 55 | 65 | 65 | 10 | ..... | 10 | ..... | ..... | ..... |
| Woolen Yarns, | 78 | 60 | 50 | ..... | ..... | ..... | 18 | 10 | 28 |
| Woolen and Worsted Goods, | 300 | 375 | 325 | 75 | ..... | 25 | ..... | 50 | ..... |
| Total, | 5,390 | 4,543 | 4,001 | ..... | ..... | ..... | 847 | 542 | 1,389 |
| *Cotton.* | | | | | | | | | |
| Cotton Goods, | 223 | 218 | 208 | ..... | ..... | ..... | 5 | 10 | 15 |
| Cotton Goods, | 82 | 74 | 56 | ..... | ..... | ..... | 8 | 18 | 26 |
| Cotton Goods,‖ | 40 | 20 | ..... | ..... | ..... | ..... | 20 | 20 | 40 |
| Cotton Goods, | 84 | 84 | 84 | ..... | ..... | ..... | ..... | ..... | ..... |
| Cotton Goods, | 271 | 315 | 209 | 98 | ..... | ..... | ..... | 106 | 63 |
| Cotton Goods, | 123 | 65 | 60 | ..... | ..... | ..... | 58 | 5 | 63 |
| Cotton Damask, | 156 | 39 | 77 | ..... | 38 | ..... | 117 | ..... | 79 |
| Cotton Weaving, | 90 | 105 | 130 | 15 | 25 | 40 | ..... | ..... | ..... |
| Cotton Yarns, | 182 | 182 | 182 | ..... | ..... | ..... | ..... | ..... | ..... |
| Cotton Goods, | 500 | 500 | 235 | ..... | ..... | ..... | ..... | 265 | 265 |
| Cotton Yarns, | 55 | 55 | 55 | ..... | ..... | ..... | ..... | ..... | ..... |
| Cotton Yarns, | 24 | 24 | 27 | ..... | 3 | 3 | ..... | ..... | ..... |
| Cotton Yarns, | 100 | 100 | 100 | ..... | ..... | ..... | ..... | ..... | ..... |
| Cotton Goods, | 100 | 100 | 100 | ..... | ..... | ..... | ..... | ..... | ..... |
| Cotton Goods, | 231 | 225 | 215 | ..... | ..... | ..... | 6 | 10 | 16 |
| Cotton Yarns, | 110 | 81 | 85 | ..... | 4 | ..... | 29 | ..... | 25 |

*Plant not in operation in 1894.
‖Out of business in 1894.

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| ..... | ..... | ..... | 12½ | 14¼ | 25 | 282 | 246 | 265 | ..... | 19 | ..... | 36 | ..... | 17 |
| ..... | ..... | ..... | 22¼ | 14¼ | 33⅓ | 305 | 240 | 240 | ..... | ..... | ..... | 65 | ..... | 45 |
| ..... | ..... | ..... | ..... | ..... | ..... | 308 | 199 | ..... | ..... | ..... | ..... | 109 | 199 | 308 |
| 104½ | ..... | 83⅔ | ..... | 10¼ | ..... | 293 | 211 | 291 | ..... | 80 | ..... | 82 | ..... | 2 |
| ..... | ..... | ..... | 66⅔ | ..... | ..... | 307 | 185 | ..... | ..... | ..... | ..... | 122 | 185 | 307 |
| ..... | ..... | ..... | 51½ | ..... | ..... | 300 | 155 | 220 | ..... | 65 | ..... | 145 | ..... | 80 |
| ..... | ..... | ..... | 12½ | 21⅞ | 31⅔ | 304 | 280 | 280 | ..... | ..... | ..... | 24 | ..... | 24 |
| ..... | ..... | ..... | .09⅔ | 09¼ | 18 | 298 | 242 | 295 | ..... | 53 | ..... | 56 | ..... | 3 |
| 18¼ | ..... | 18¼ | ..... | ..... | ..... | 300 | 150 | 200 | ..... | 50 | ..... | 150 | ..... | 100 |
| ..... | ..... | ..... | .23 | 16⅔ | 37¼ | 305 | 225 | 180 | ..... | ..... | ..... | 80 | 45 | 125 |
| 25 | ..... | 08⅓ | ..... | 13⅓ | ..... | 300 | 300 | 265 | ..... | ..... | ..... | ..... | 35 | 35 |
| ..... | ..... | ..... | 15⅔ | 12½ | 25¾ | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 02½ | 04½ | 06½ | 309 | 306 | 269 | ..... | ..... | ..... | 3 | 37 | 40 |
| ..... | ..... | ..... | 09½ | 24⅓ | 31¾ | 304 | 234 | 303 | ..... | 69 | ..... | 70 | ..... | 1 |
| ..... | ..... | ..... | 50 | ..... | ..... | 300 | 100 | ..... | ..... | ..... | ..... | 200 | 200 | 300 |
| ..... | ..... | ..... | ..... | ..... | ..... | 308 | 133 | 175 | ..... | 42 | ..... | 175 | ..... | 133 |
| 16¼ | ..... | ..... | ..... | 33⅔ | 23¼ | 271 | 280 | 208 | 9 | ..... | ..... | ..... | 72 | 63 |
| ..... | ..... | ..... | 47 | 07⅔ | 51¼ | 305 | 200 | 290 | ..... | 90 | ..... | 105 | ..... | 15 |
| ..... | 97⅓ | ..... | .75 | ..... | 50⅔ | 308 | 70 | 280 | ..... | 210 | ..... | 238 | ..... | 28 |
| 16⅔ | 23⅞ | 44⅔ | ..... | ..... | ..... | 312 | 286 | 300 | ..... | 14 | ..... | 26 | ..... | 12 |
| ..... | ..... | ..... | ..... | ..... | ..... | 300 | 266 | 294 | ..... | 28 | ..... | 34 | ..... | 6 |
| ..... | ..... | ..... | ..... | ..... | ..... | 300 | 150 | 300 | ..... | 150 | ..... | 150 | ..... | ..... |
| ..... | ..... | ..... | ..... | ..... | ..... | 302 | 280 | 264 | ..... | ..... | ..... | 22 | 16 | 38 |
| ..... | 12½ | 12½ | ..... | ..... | ..... | 305 | 235 | 170 | ..... | ..... | ..... | 70 | 65 | 135 |
| ..... | ..... | ..... | ..... | ..... | ..... | 310 | 60 | 200 | ..... | 140 | ..... | 250 | ..... | 110 |
| ..... | ..... | ..... | ..... | ..... | ..... | 310 | 250 | 300 | ..... | 50 | ..... | 60 | ..... | 10 |
| ..... | ..... | ..... | .02¼ | 04½ | 07 | 309 | 307 | 296 | ..... | ..... | ..... | 2 | 11 | 13 |
| ..... | 05 | ..... | 26⅓ | ..... | 22¾ | 280 | 209 | 253 | ..... | 44 | ..... | 71 | ..... | 27 |

*Statistics Relating to Manu-*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Cotton Goods, | 385 | 313 | 350 | ..... | 37 | ..... | 72 | ..... | 35 |
| Cotton Goods, | 65 | 60 | 50 | ..... | ..... | ..... | 5 | 10 | 15 |
| Cotton Goods, | 150 | 150 | 150 | ..... | ..... | ..... | ..... | ..... | ..... |
| Cotton Goods,* | 51 | 42 | ..... | ..... | ..... | ..... | 9 | 42 | 51 |
| Cotton Goods, | 796 | 738 | 720 | ..... | ..... | ..... | 58 | 18 | 76 |
| Total, | 3,818 | 3,490 | 3,093 | ..... | ..... | ..... | 328 | 397 | 725 |
| *Glass.* | | | | | | | | | |
| Glass-ware,‖ | 377 | 236 | ..... | ..... | ..... | ..... | 141 | 236 | 377 |
| Glass-ware, | 316 | 262 | 289 | ..... | 27 | ..... | 54 | ..... | 27 |
| Glass-ware, | 137 | 141 | 106 | 4 | ..... | ..... | ..... | 35 | 31 |
| Glass-ware,‖ | 211 | 197 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Glass-ware, | 350 | 307 | 309 | ..... | 2 | ..... | 43 | ..... | 41 |
| Glass-ware,‖ | 155 | 150 | ..... | ..... | ..... | ..... | 5 | 150 | 155 |
| Glass-ware, | 240 | 245 | 130 | 5 | ..... | ..... | ..... | 115 | 110 |
| Glass-ware, | 190 | 137 | 128 | ..... | ..... | ..... | 53 | 9 | 62 |
| Glass-ware, | 141 | 144 | 174 | 3 | 30 | 33 | ..... | ..... | ..... |
| Glass-ware, | 500 | 520 | 600 | 20 | 80 | 100 | ..... | ..... | ..... |
| Plate Glass, | 550 | 400 | 400 | ..... | ..... | ..... | 150 | ..... | 150 |
| Window Glass, | 196 | 204 | 204 | 8 | ..... | 8 | ..... | ..... | ..... |
| Glass-ware, | 303 | 323 | 192 | 20 | ..... | ..... | ..... | 31 | 11 |
| Bottles, | 84 | 90 | 75 | 6 | ..... | ..... | ..... | 15 | 9 |
| Glass, | 273 | 273 | 273 | ..... | ..... | ..... | ..... | ..... | ..... |
| Glass, | 450 | 300 | 300 | ..... | ..... | ..... | 150 | ..... | 150 |
| Glass bottles, | 206 | 196 | 175 | ..... | ..... | ..... | 10 | 11 | 21 |
| Window Glass, | 100 | 100 | 108 | ..... | ..... | ..... | ..... | 8 | 8 |
| Glass-ware, | 218 | 230 | 210 | 12 | ..... | ..... | ..... | 20 | 8 |
| Plate Glass, | 2,258 | 2,124 | 1,479 | ..... | ..... | ..... | 134 | 645 | 779 |
| Total, | 7,239 | 6,579 | 5,152 | ..... | ..... | ..... | 660 | 1,427 | 2,087 |

*Out of business in 1894. ‖Plant not in operation in 1894.

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1891 from 1893. | 1894 from 1892. |
| ..... | 11⅔ | ..... | 18⅔ | ..... | 09⅛ | 301 | 220 | 256 | ..... | 36 | ..... | 81 | ..... | 45 |
| ..... | ..... | ..... | 07¾ | 12½ | 23 | 310 | 310 | 310 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | ..... | ..... | ..... | 300 | 150 | 200 | ..... | 50 | ..... | 150 | ..... | 100 |
| ..... | ..... | ..... | 17½ | ..... | ..... | 296 | 221 | ..... | ..... | ..... | ..... | 75 | 221 | 296 |
| ..... | ..... | ..... | 07⅓ | 02½ | 09½ | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 08⅝ | 11⅓ | 19 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 37⅓ | ..... | ..... | 258 | 54 | ..... | ..... | ..... | ..... | 204 | 54 | 258 |
| ..... | 09 | ..... | 17 | ..... | 08½ | 264 | 252 | 254 | ..... | 2 | ..... | 12 | ..... | 10 |
| 03 | ..... | ..... | ..... | 24¾ | 29¼ | 252 | 156 | 252 | ..... | 94 | ..... | 94 | ..... | ..... |
| ..... | ..... | ..... | 06⅔ | ..... | ..... | 258 | 144 | ..... | ..... | ..... | ..... | 114 | 144 | 258 |
| ..... | .006 | ..... | 12⅓ | ..... | 13¼ | 258 | 228 | 276 | ..... | 48 | 18 | 30 | ..... | ..... |
| ..... | ..... | ..... | 03¼ | ..... | ..... | 315 | 154 | ..... | ..... | ..... | ..... | 161 | 154 | 315 |
| .02 | ..... | ..... | ..... | 47 | 47 | 255 | 156 | 180 | ..... | 24 | ..... | 99 | ..... | 75 |
| ..... | ..... | ..... | .28 | 06¾ | 32¾ | 222 | 177 | 276 | ..... | 99 | 54 | 45 | ..... | ..... |
| 02 | 21 | 15 | ..... | ..... | ..... | 204 | 138 | 266 | ..... | 128 | 62 | 66 | ..... | ..... |
| .04 | 13⅓ | 16⅔ | ..... | ..... | ..... | 264 | 210 | 280 | ..... | 70 | 16 | 54 | ..... | ..... |
| ..... | ..... | ..... | 27¼ | ..... | 27¼ | 300 | 200 | 260 | ..... | 60 | ..... | 100 | ..... | 40 |
| .04 | ..... | .04 | ..... | ..... | ..... | 260 | 270 | 258 | 10 | ..... | ..... | ..... | 12 | 2 |
| 06½ | ..... | ..... | ..... | .09 | 03⅔ | 258 | 144 | 276 | ..... | 132 | 18 | 114 | ..... | ..... |
| 07 | ..... | ..... | ..... | 16⅔ | 10 | 70 | 144 | 56 | 74 | ..... | ..... | ..... | 88 | 14 |
| ..... | ..... | ..... | ..... | ..... | ..... | 273 | 261 | 275 | ..... | 14 | 2 | 12 | ..... | ..... |
| ..... | ..... | ..... | 33⅓ | ..... | 33⅓ | 253 | 209 | 209 | ..... | ..... | ..... | 44 | ..... | 44 |
| ..... | ..... | ..... | .05 | 06¾ | 10⅛ | 253 | 242 | 173 | ..... | ..... | ..... | 11 | 69 | 80 |
| ..... | .08 | .08 | ..... | ..... | ..... | 257 | 162 | 132 | ..... | ..... | ..... | 95 | 30 | 125 |
| 05½ | ..... | ..... | ..... | 08¾ | 03⅞ | 240 | 275 | 265 | 25 | ..... | 15 | ..... | 10 | ..... |
| ..... | ..... | ..... | 05⅞ | 30¼ | 34 | 247 | 172 | 297 | ..... | 125 | 50 | 75 | ..... | ..... |
| ..... | ..... | ..... | .09⅛ | 21⅔ | 28⅞ | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| *Fabrics* | | | | | | | | | |
| Hosiery and Underwear, | 728 | 725 | 725 | ..... | ..... | ..... | 3 | ..... | 3 |
| Silk and Wool and Cotton and Wool, | 130 | 130 | 70 | ..... | ..... | ..... | ..... | 60 | 60 |
| Chenille, Upholstery and Drapery, | 415 | 363 | 335 | ..... | ..... | ..... | 52 | 28 | 80 |
| Quilts, Lap Robes, &c., | 165 | 120 | 95 | ..... | ..... | ..... | 45 | 25 | 70 |
| Knit Underwear, | 357 | 392 | 278 | 35 | ..... | ..... | ..... | 114 | 79 |
| Tapes, Webs and Narrow Fabrics, | 160 | 120 | 140 | ..... | 20 | ..... | 40 | ..... | 20 |
| Turkish Towels, Rugs, Tidies, &c., | 160 | 140 | 150 | ..... | 10 | ..... | 20 | ..... | 10 |
| Lace, | 325 | 300 | 452 | ..... | 152 | 127 | 25 | ..... | ..... |
| Chenille Curtains, &c., | 525 | 190 | 200 | ..... | 10 | ..... | 335 | ..... | 325 |
| Smyrna Rugs, Lace Curtains, &c., | 2,114 | 1,800 | 1,380 | ..... | ..... | ..... | 314 | 420 | 734 |
| Worsted Yarns and Spun Silk Yarns, | 400 | 370 | 400 | ..... | 30 | ..... | 30 | ..... | ..... |
| Chenille Curtains, Rugs, &c., | 465 | 423 | 396 | ..... | ..... | ..... | 42 | 27 | 69 |
| Plush, | 250 | 200 | 120 | ..... | ..... | ..... | 50 | 80 | 130 |
| Cotton and Woolen Goods, | 49 | 51 | 54 | 2 | 3 | 5 | ..... | ..... | ..... |
| Turkish Towels, &c., | 120 | 110 | 150 | ..... | 40 | 30 | 10 | ..... | ..... |
| Worsted and Woolen Goods, | 600 | 530 | 500 | ..... | ..... | ..... | 70 | 30 | 100 |
| Cotton and Woolen Yarns, | 61 | 58 | 47 | ..... | ..... | ..... | 3 | 11 | 14 |
| Hosiery and Hosiery Yarns, | 295 | 225 | 231 | ..... | 6 | ..... | 70 | ..... | 64 |
| Textile, | 43 | 42 | 70 | ..... | 28 | 27 | 1 | ..... | ..... |
| Tickings and Stripes, | 155 | 150 | 205 | ..... | 55 | 50 | 5 | ..... | ..... |
| Knit Goods, | 260 | 295 | 290 | 35 | ..... | 30 | ..... | 5 | ..... |
| Plush, Table Covers, &c., | 100 | 80 | 80 | ..... | ..... | ..... | 20 | ..... | 20 |
| Hosiery, &c., | 135 | 150 | 120 | 15 | ..... | ..... | ..... | 30 | 15 |
| Wood-Working Machinery, | 90 | 86 | 74 | ..... | ..... | ..... | 4 | 12 | 16 |
| Textile, | 33 | 33 | 33 | ..... | ..... | ..... | ..... | ..... | ..... |

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| ..... | ..... | ..... | .004 | ..... | .004 | 300 | 263 | 245 | ..... | ..... | ..... | 37 | 18 | 55 |
| ..... | ..... | ..... | ..... | 46⅙ | 46⅙ | 300 | 270 | 165 | ..... | ..... | ..... | 30 | 105 | 135 |
| ..... | ..... | ..... | 12½ | 07½ | 19¾ | 345 | 285 | 309 | ..... | 24 | ..... | 60 | ..... | 36 |
| ..... | ..... | ..... | 27¾ | 20⅞ | 42½ | 309 | 259 | 250 | ..... | ..... | ..... | 50 | 9 | 59 |
| 09¾ | ..... | ..... | ..... | 39 | 22⅛ | 307 | 289 | 268 | ..... | ..... | ..... | 18 | 21 | 39 |
| ..... | 16⅔ | ..... | 25 | ..... | 12½ | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | 07⅜ | ..... | 12½ | ..... | 06¼ | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 07⅔ | 50⅔ | 39 | 307 | 300 | 306 | ..... | 6 | ..... | 7 | ..... | 1 |
| ..... | 05¼ | ..... | 63¾ | ..... | 61⅞ | 300 | 290 | 305 | ..... | 15 | 5 | 10 | ..... | ..... |
| ..... | ..... | ..... | 14⅔ | 25½ | 35¼ | 230 | 220 | 245 | ..... | 25 | 15 | 10 | ..... | ..... |
| ..... | 07½ | ..... | 07½ | ..... | ..... | 300 | 230 | 300 | ..... | 70 | ..... | 70 | ..... | ..... |
| ..... | ..... | ..... | 09¼ | 06¼ | 14¾ | 310 | 310 | 290 | ..... | ..... | ..... | ..... | 20 | 20 |
| ..... | ..... | ..... | 20 | 40 | 52 | 300 | 300 | 200 | ..... | ..... | ..... | ..... | 100 | 100 |
| 05 | 05¾ | 10¼ | ..... | ..... | ..... | 300 | 252 | 300 | ..... | 48 | ..... | 48 | ..... | ..... |
| ..... | 36¼ | 25 | 08½ | ..... | ..... | 300 | 252 | 304 | ..... | 52 | 4 | 48 | ..... | ..... |
| ..... | ..... | ..... | 11⅔ | 05½ | 16⅔ | 304 | 304 | 304 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | .05 | 19 | 18 | 302 | 285 | 287 | ..... | 2 | ..... | 17 | ..... | 15 |
| ..... | 02¼ | ..... | 27 | ..... | 21¾ | 287 | 261 | 292 | ..... | 31 | .5 | 26 | ..... | ..... |
| ..... | 66½ | 62¾ | .02⅓ | ..... | ..... | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | 36⅔ | 32¼ | 03¼ | ..... | ..... | 286 | 196 | 192 | ..... | ..... | ..... | 90 | 4 | 94 |
| 13½ | ..... | 11⅔ | ..... | 01⅔ | ..... | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 20 | ..... | 20 | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| 11 | ..... | ..... | ..... | 20 | 11 | 305 | 267 | 225 | ..... | ..... | ..... | 38 | 42 | 80 |
| ..... | ..... | ..... | 04⅓ | 14 | 17¾ | 308 | 251 | 254 | ..... | 3 | ..... | 57 | ..... | 54 |
| ..... | ..... | ..... | ..... | ..... | ..... | 306 | 260 | 204 | ..... | ..... | ..... | 46 | 56 | 102 |

*Statistics Relating to Manu-*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Wood-Working Machinery, .. | 154 | 142 | 139 | ..... | ..... | ..... | 12 | 3 | 15 |
| Cotton and Woolen Yarns, .. | 50 | 36 | 26 | ..... | ..... | ..... | 14 | 10 | 24 |
| Cotton Goods, ..... | 48 | 24 | 24 | ..... | ..... | ..... | 24 | ..... | 24 |
| Cotton and Woolen Goods, .. | 150 | 120 | 120 | ..... | ..... | ..... | 30 | ..... | 30 |
| Cotton Carpet Yarns, ..... | 59 | 47 | 55 | ..... | 8 | ..... | 12 | ..... | 5 |
| Dress and Cloak Trimmings,. | 350 | 200 | 200 | ..... | ..... | ..... | 150 | ..... | 150 |
| Cotton and Woolen Goods,.. | 55 | 40 | 40 | ..... | ..... | ..... | 15 | ..... | 15 |
| Rubber Boots and Shoes,.... | 325 | 350 | 350 | 25 | ..... | 25 | ..... | ..... | ..... |
| Carpet Yarns, ..... | 42 | 38 | 38 | ..... | ..... | ..... | 4 | ..... | 4 |
| Carpet Yarns, ..... | 80 | 75 | 75 | ..... | ..... | ..... | 5 | ..... | 5 |
| Cotton and Woolen Goods, .. | 279 | 278 | 276 | ..... | ..... | ..... | 1 | 2 | 3 |
| Cotton and Woolen Cloths, . | 132 | 101 | 114 | ..... | 13 | ..... | 31 | ..... | 18 |
| Cotton and Woolen Goods, .. | 140 | 110 | 145 | ..... | 35 | 5 | 30 | ..... | ..... |
| Cottonades, ..... | 135 | 145 | 146 | 10 | 1 | 11 | ..... | ..... | ..... |
| Carpets and Upholstery Fabrics, ..... | 140 | 120 | 135 | ..... | 15 | ..... | 20 | ..... | 5 |
| Worsted and Woolen Yarns, &c., ..... | 1,200 | 750 | 512 | ..... | ..... | ..... | 450 | 238 | 688 |
| Cotton and Woolen Goods, .. | 120 | 90 | 99 | ..... | 9 | ..... | 30 | ..... | 21 |
| Cotton and Woolen Cloth, &c., ..... | 92 | 92 | 94 | ..... | 2 | 2 | ..... | ..... | ..... |
| Cotton and Woolen Yarns,... | 56 | 43 | 42 | ..... | ..... | ..... | 13 | 1 | 14 |
| Knit Goods, ..... | 200 | 150 | 200 | ..... | 50 | ..... | 50 | ..... | ..... |
| Cotton, Woolen and Merino Yarns, ..... | 60 | 60 | 30 | ..... | ..... | ..... | ..... | 30 | 30 |
| Hosiery and Knit Goods, ... | 175 | 150 | 150 | ..... | ..... | ..... | 25 | ..... | 25 |
| Woolen and Merino Yarns,.. | 35 | 41 | 24 | 6 | ..... | ..... | ..... | 17 | 11 |
| Worsted Goods, ..... | 300 | 100 | 200 | ..... | 100 | ..... | 200 | ..... | 100 |
| Knit Underwear, ..... | 292 | 264 | 226 | ..... | ..... | ..... | 28 | 38 | 66 |
| Cheviots, &c., ..... | 40 | 30 | 31 | ..... | 1 | ..... | 10 | ..... | 9 |
| Cotton and Worsted Goods,. | 175 | 140 | 134 | ..... | ..... | ..... | 35 | 6 | 41 |
| Table Covers, ..... | 77 | 60 | 74 | ..... | 14 | ..... | 17 | ..... | 3 |

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| ..... | ..... | ..... | 07¾ | 02⅛ | 09¾ | 292 | 243 | 274 | ..... | 31 | ..... | 49 | ..... | 18 |
| ..... | ..... | ..... | 28 | 25 | 48 | 300 | 210 | 207 | ..... | ..... | ..... | 90 | 3 | 93 |
| ..... | ..... | ..... | 50 | ..... | 50 | 300 | 150 | 150 | ..... | ..... | ..... | 150 | ..... | 150 |
| ..... | ..... | ..... | 20 | ..... | 20 | 290 | 240 | 220 | ..... | ..... | ..... | 50 | 30 | 80 |
| ..... | ..... | ..... | 20⅓ | 17 | 08½ | 300 | 240 | 180 | ..... | ..... | ..... | 60 | 60 | 120 |
| ..... | ..... | ..... | 43 | ..... | 43 | 308 | 308 | 308 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 27½ | ..... | 27½ | 312 | 312 | 312 | ..... | ..... | ..... | ..... | ..... | ..... |
| 07⅔ | ..... | 07⅔ | ..... | ..... | ..... | 250 | 230 | 248 | ..... | 18 | ..... | 20 | ..... | 2 |
| ..... | ..... | ..... | 09½ | ..... | 09½ | 300 | 200 | 250 | ..... | 50 | ..... | ..... | 100 | 50 |
| ..... | ..... | ..... | 06¼ | ..... | 06¼ | 320 | 240 | 206 | ..... | ..... | ..... | 80 | 34 | 114 |
| ..... | ..... | ..... | .003⅔ | .007 | .01 | 308 | 265 | 220 | ..... | ..... | ..... | 43 | 45 | 88 |
| ..... | 12¾ | ..... | 23½ | ..... | 13⅔ | 295 | 220 | 199 | ..... | ..... | ..... | 75 | 21 | 96 |
| ..... | 31¾ | 03⅔ | 21½ | ..... | ..... | 308 | 260 | 280 | ..... | 20 | ..... | 48 | ..... | 28 |
| .07 | .006 | 08¼ | ..... | ..... | ..... | 298 | 225 | 278 | ..... | 53 | ..... | 73 | ..... | 20 |
| ..... | 12½ | ..... | 14⅓ | ..... | 03½ | 336 | 240 | 210 | ..... | ..... | ..... | 96 | 30 | 126 |
| ..... | ..... | ..... | 37½ | 31¾ | 57⅓ | 300 | 260 | 290 | ..... | 30 | ..... | 40 | ..... | 10 |
| ..... | 10 | ..... | 25 | ..... | 17½ | 300 | 242 | 260 | ..... | 18 | ..... | 58 | ..... | 40 |
| ..... | ..... | ..... | ..... | 02⅛ | 02¼ | 300 | 250 | 293 | ..... | 43 | ..... | 50 | ..... | 7 |
| ..... | 02⅓ | ..... | 23¼ | ..... | 25 | 293 | 224 | 205 | ..... | ..... | ..... | 69 | 19 | 88 |
| ..... | 25 | ..... | 25 | ..... | ..... | 300 | 210 | 200 | ..... | ..... | ..... | 90 | 10 | 100 |
| ..... | ..... | ..... | ..... | 50 | 50 | 300 | 150 | 200 | ..... | 50 | ..... | 150 | ..... | 100 |
| ..... | ..... | ..... | 14⅓ | ..... | 14⅓ | 300 | 275 | 300 | ..... | 25 | ..... | 25 | ..... | ..... |
| 17 | ..... | ..... | ..... | 41½ | 31½ | 241 | 224 | 185 | ..... | ..... | ..... | 17 | 39 | 56 |
| ..... | 100 | ..... | 66⅔ | ..... | 35⅓ | 320 | 106 | 212 | ..... | 106 | ..... | 214 | ..... | 108 |
| ..... | ..... | ..... | 09½ | 14¼ | 22⅓ | 292 | 264 | 226 | ..... | ..... | ..... | 28 | 38 | 66 |
| ..... | 03⅓ | ..... | 25 | ..... | 22½ | 305 | 270 | 303 | ..... | 33 | ..... | 35 | ..... | 2 |
| ..... | ..... | ..... | 20 | 04¼ | 23½ | 307 | 270 | 309 | ..... | 39 | 2 | 37 | ..... | ..... |
| ..... | 23½ | ..... | .22 | ..... | 03¾ | 305 | 275 | 300 | ..... | 25 | ..... | 30 | ..... | 5 |

*Statistics Relating to Manu-*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Cotton Merino and Worsted Goods, | 130 | 100 | 100 | ..... | ..... | ..... | 30 | ..... | 30 |
| Carpet and Rug Yarn, | 125 | 95 | 80 | ..... | ..... | ..... | 30 | 15 | 45 |
| Cotton and Woolen Goods,* | 125 | 120 | ..... | ..... | ..... | ..... | 5 | 120 | 125 |
| Chenille Goods, | 97 | 77 | 95 | ..... | 18 | ..... | 20 | ..... | 2 |
| Knit Underwear, | 152 | 98 | 64 | ..... | ..... | ..... | 54 | 34 | 88 |
| Knit Goods, | 145 | 198 | 150 | 53 | ..... | 5 | ..... | 48 | ..... |
| Hosiery and Underwear, | 160 | 165 | 160 | 5 | ..... | ..... | ..... | 5 | ..... |
| Dress Trimmings and Braids, | 240 | 118 | 100 | ..... | ..... | ..... | 122 | 18 | 140 |
| Chenille Curtains and Covers, | 75 | 100 | 150 | 25 | 50 | 75 | ..... | ..... | ..... |
| Wool Shoddies,* | 36 | 36 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Carpet and Carpet Yarns, | 750 | 375 | 475 | ..... | 100 | ..... | 375 | ..... | 275 |
| Table Covers and Mohair Plushes, | 163 | 112 | 46 | ..... | ..... | ..... | 51 | 66 | 117 |
| Yarns, | 24 | 24 | 24 | ..... | ..... | ..... | ..... | ..... | ..... |
| Cotton, Woolen and Mixed Goods, | 120 | 115 | 100 | ..... | ..... | ..... | 5 | 15 | 20 |
| Cotton and Woolen Goods, | 125 | 140 | 50 | 15 | ..... | ..... | ..... | 90 | 75 |
| Silk Throwing and Silk Weaving, | 195 | 206 | 243 | 11 | 37 | 48 | ..... | ..... | ..... |
| Textile Fabrics, | 240 | 225 | 230 | ..... | 5 | ..... | 15 | ..... | 10 |
| Hosiery Yarn, | 43 | 44 | 40 | 1 | ..... | ..... | ..... | 4 | 3 |
| Organ and Piano, | 100 | 100 | 100 | ..... | ..... | ..... | ..... | ..... | ..... |
| Blankets, Overcoating, Yarns, &c., | 1,590 | 1,565 | 1,563 | ..... | ..... | ..... | 25 | 2 | 27 |
| Cabinet Organs, | 62 | 62 | 62 | ..... | ..... | ..... | ..... | ..... | ..... |
| Caramels, | 500 | 400 | 390 | ..... | ..... | ..... | 100 | 10 | 110 |
| Silk Throwing (on Commission), | 250 | 175 | 190 | ..... | 15 | ..... | 75 | ..... | 60 |

*Plant not in operation in 1894.

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| ..... | ..... | ..... | 23 | ..... | 23 | 300 | 260 | 300 | ..... | 40 | ..... | 40 | ..... | ..... |
| ..... | ..... | ..... | 24 | 15⅞ | 36 | 307 | 261 | 258 | ..... | ..... | ..... | 46 | 3 | 49 |
| ..... | ..... | ..... | .04 | ..... | ..... | 300 | 250 | ..... | ..... | ..... | ..... | 50 | 250 | 300 |
| ..... | 23⅓ | ..... | 20⅔ | ..... | .02 | 308 | | 308 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 35½ | 34⅔ | 57¾ | 307 | 306 | 306 | ..... | ..... | ..... | 1 | ..... | 1 |
| 36½ | ..... | .03½ | ..... | 24¼ | ..... | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| .05 | ..... | ..... | ..... | .05 | ..... | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 50⅞ | 15¼ | 58¼ | 296 | 270 | 228 | ..... | ..... | ..... | 26 | 42 | 68 |
| 33⅓ | 50 | 100 | ..... | ..... | ..... | 300 | 270 | 290 | ..... | 20 | ..... | 30 | ..... | 10 |
| ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | 26⅔ | ..... | 50 | ..... | 36⅔ | 309 | 251 | 300 | ..... | 49 | ..... | 58 | ..... | 9 |
| ..... | ..... | ..... | 31¼ | 58¾ | 71 | 303 | 231 | 109 | ..... | ..... | ..... | 72 | 122 | 194 |
| ..... | ..... | ..... | ..... | ..... | ..... | 300 | 220 | 140 | ..... | ..... | ..... | 80 | 80 | 160 |
| ..... | ..... | ..... | 04½ | 13 | 16⅔ | 305 | 245 | 290 | ..... | 45 | ..... | 60 | ..... | 15 |
| 12 | ..... | ..... | ..... | 64¼ | 40 | 304 | 304 | 300 | ..... | ..... | ..... | ..... | 4 | 4 |
| 05¾ | 13 | 24⅔ | ..... | ..... | ..... | 308 | 269 | 290 | ..... | 21 | ..... | 41 | ..... | 18 |
| ..... | 02¼ | ..... | 06¼ | ..... | .04¼ | 308 | 276 | 271 | ..... | ..... | ..... | 32 | 5 | 37 |
| 02⅓ | ..... | ..... | ..... | .09 | .07 | 311 | 258 | 306 | ..... | 48 | ..... | 53 | ..... | 5 |
| ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | .01¾ | 001¼ | 01½ | 298 | 257 | 285 | ..... | 28 | ..... | 41 | ..... | 13 |
| ..... | ..... | ..... | ..... | ..... | ..... | 300 | 298 | 263 | ..... | ..... | ..... | 2 | 35 | 37 |
| ..... | ..... | ..... | .20 | .02½ | 22 | 310 | 310 | 300 | ..... | ..... | ..... | ..... | 10 | 10 |
| ..... | 08½ | ..... | .30 | ..... | 24 | 300 | 200 | 271 | ..... | 71 | ..... | 100 | ..... | 29 |

*Statistics Relating to Manu-*

| INDUSTRIES. | EMPLOYES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Average number of employes. | | | Increase in average number of employes. | | | Decrease in average number of employes. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Broad and Thrown Silks, .... | 1,200 | 600 | 1,000 | ..... | 400 | ..... | 600 | ..... | 200 |
| Electric Light Carbons, ..... | 48 | 50 | 55 | 2 | 5 | 7 | ..... | ..... | ..... |
| Sewing Machines, &c., ..... | 161 | 100 | 100 | ..... | ..... | ..... | 61 | ..... | 61 |
| Silk Throwing, ..... | 50 | 48 | 52 | ..... | 4 | 2 | 2 | ..... | ..... |
| Ribbons, ..... | 119 | 112 | 122 | ..... | 10 | 3 | 7 | ..... | ..... |
| Silk Throwing, ..... | 130 | 160 | 180 | 30 | 20 | 50 | ..... | ..... | ..... |
| Silk Spinning and Weaving,. | 360 | 303 | 370 | ..... | 67 | 10 | 57 | ..... | ..... |
| Parlor Matches, ..... | 140 | 125 | 100 | ..... | ..... | ..... | 15 | 25 | 40 |
| Heating Apparatus, &c., .... | 45 | 49 | 57 | 4 | 8 | 12 | ..... | ..... | ..... |
| Ornamental Iron Work, &c.,. | 115 | 103 | 110 | ..... | 7 | ..... | 12 | ..... | 5 |
| Agricultural Implements, ... | 16 | 17 | 11 | 1 | ..... | ..... | ..... | 6 | 5 |
| Water Wheels, ..... | 95 | 130 | 100 | 35 | ..... | 5 | ..... | 30 | ..... |
| Agricultural Implements, &c., | 500 | 510 | 490 | 10 | ..... | ..... | ..... | 20 | 10 |
| Cotton and Woolen Goods, .. | 152 | 152 | 104 | ..... | ..... | ..... | ..... | 48 | 48 |
| Carpet Yarn, ..... | 65 | 50 | 50 | ..... | ..... | ..... | 15 | ..... | 15 |
| Calico Printing, ..... | 800 | 750 | 825 | ..... | 75 | 25 | 50 | ..... | ..... |
| Cotton and Woolen Goods, .. | 115 | 115 | 48 | ..... | ..... | ..... | ..... | 67 | 67 |
| Cotton and Woolen Goods, .. | 47 | 53 | 55 | 6 | 2 | 8 | ..... | ..... | ..... |
| Silk Plushes, ..... | 91 | 86 | 83 | ..... | ..... | ..... | 5 | 3 | 8 |
| Silk, ..... | 546 | 465 | 481 | ..... | 16 | ..... | 81 | ..... | 65 |
| Total, ..... | 23,338 | 19,507 | 19,099 | ..... | ..... | ..... | 3,831 | 408 | 4,239 |

*facturing in Pennsylvania.*

| EMPLOYES. | | | | | | TIME. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Percentage of increase in number of employes. | | | Percentage of decrease in number of employes. | | | Number of days in operation. | | | Increase in number of days in operation. | | | Decrease in number of days in operation. | | |
| 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| ..... | 66⅔ | ..... | .50 | ..... | 16⅔ | 305 | 219 | 302 | ..... | 83 | ..... | 86 | ..... | 3 |
| 04¼ | 10 | 14 | ..... | ..... | ..... | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 37⅞ | ..... | 37⅞ | 302 | 241 | 200 | ..... | ..... | ..... | 61 | 41 | 102 |
| ..... | 08⅓ | .04 | .04 | ..... | ..... | 304 | 226 | 300 | ..... | 74 | ..... | 78 | ..... | 4 |
| ..... | .09 | .02½ | .06 | ..... | ..... | 307 | 247 | 302 | ..... | 55 | ..... | 60 | ..... | 5 |
| 23 | 12½ | 38½ | ..... | ..... | ..... | 309 | 310 | 305 | 1 | ..... | ..... | ..... | 5 | 4 |
| ..... | 21⅔ | 02⅔ | 16 | ..... | ..... | 300 | 300 | 300 | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 10⅔ | 20 | 28⅔ | 248 | 260 | 250 | 12 | ..... | 2 | ..... | 10 | ..... |
| .09 | 16⅓ | 26⅔ | ..... | ..... | ..... | 300 | 300 | 303 | ..... | 3 | 3 | ..... | ..... | ..... |
| ..... | 06⅞ | ..... | 10½ | ..... | 04⅓ | 303 | 290 | 295 | ..... | 5 | ..... | 13 | ..... | 8 |
| 06¼ | ..... | ..... | ..... | 35⅓ | 31¼ | 309 | 305 | 297 | 5 | ..... | ..... | ..... | 8 | 3 |
| 36⅞ | ..... | 05¼ | ..... | 23 | ..... | 307 | 307 | 307 | ..... | ..... | ..... | ..... | ..... | ..... |
| .02 | ..... | ..... | ..... | 03¾ | .02 | 300 | 275 | 300 | ..... | 25 | ..... | 25 | ..... | ..... |
| ..... | ..... | ..... | ..... | 31½ | 31½ | 305 | 250 | 303 | ..... | 53 | ..... | 55 | ..... | 2 |
| ..... | ..... | ..... | 23 | ..... | 23 | 305 | 293 | 293 | ..... | ..... | ..... | 12 | ..... | 12 |
| ..... | 19 | 03⅛ | .06¼ | ..... | ..... | 300 | 270 | 239 | ..... | ..... | ..... | 30 | 31 | 61 |
| ..... | ..... | ..... | ..... | 58⅓ | 58⅓ | 288 | 173 | 280 | ..... | 107 | ..... | 115 | ..... | 8 |
| 12¾ | 03¾ | 17 | ..... | ..... | ..... | 280 | 297 | 301 | 17 | 4 | 21 | ..... | ..... | ..... |
| ..... | ..... | ..... | .04⅓ | 03½ | 09⅝ | 300 | 256 | 307 | ..... | 51 | 7 | 44 | ..... | ..... |
| ..... | 03¾ | ..... | .14⅔ | ..... | 11¾ | 298 | 215 | 288 | ..... | 73 | ..... | 83 | ..... | 10 |
| ..... | ..... | ..... | .16¼ | .02⅛ | .18⅛ | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| *Iron.* | | | | | | |
| Bolts, Nuts, Bar Iron, &c., .... | $186,339 | $178,582 | $167,402 | ..... | ..... | ..... |
| Builders' Hardware, ..... | 160,000 | 140,000 | 105,000 | ..... | ..... | ..... |
| Boilers, Heaters, &c.,* ..... | 21,000 | 21,000 | ..... | ..... | ..... | ..... |
| Skelp Iron, ..... | 170,228 | 127,175 | 95,745 | ..... | ..... | ..... |
| Hardware and Tacks, ..... | 42,752 | 40,700 | 28,916 | ..... | ..... | ..... |
| Steel and Iron Structural Material, ..... | 257,206 | 161,514 | 111,909 | ..... | ..... | ..... |
| Cars, Engines, Frogs, Switches, &c., ..... | 130,000 | 91,000 | 74,235 | ..... | ..... | ..... |
| Stoves, Heaters, &c., ..... | 59,730 | 59 800 | 45,625 | $70 | ..... | ..... |
| Builders' Hardware, ..... | 338,468 | 329,560 | 280,387 | ..... | ..... | ..... |
| Foundry and Machine Works,.. | 123,000 | 112,000 | 73,788 | ..... | ..... | ..... |
| Engines, Saw Mills, Separators, &c., ..... | 196,026 | 132,454 | 139,909 | ..... | $7,455 | ..... |
| Ice Making Machinery, Engines, &c., ..... | 223,537 | 119,135 | 83,519 | ..... | ..... | ..... |
| Engine and Repair Works, .... | 36,282 | 27,718 | 27,741 | ..... | 23 | ..... |
| Foundry and Machine Works,.. | 87,085 | 33,562 | 61,152 | ..... | 25,933 | ..... |
| Iron and Steel Plates and Bars, ..... | 323,411 | 143,092 | 52,018 | ..... | ..... | ..... |
| Pig Iron,* ..... | 51,175 | 34,352 | ..... | ..... | ..... | ..... |
| Pig Iron, &c., ..... | 160,566 | 126,871 | 41,830 | ..... | ..... | ..... |
| Rolling Mill,* ..... ..... | 166,608 | 108,606 | ..... | ..... | ..... | ..... |
| Blast Furnace, ..... | 20,142 | 19,162 | 8,071 | ..... | ..... | ..... |
| Boilers and Engines, ..... | 72,201 | 45,860 | 27,810 | ..... | ..... | ..... |
| Blast Furnace, ..... | 48,053 | 32,157 | 29,644 | ..... | ..... | ..... |
| Blast Furnace, ..... | 18,500 | 24,050 | 15,318 | 5,550 | ..... | ..... |
| Blast Furnace, ..... | 42,343 | 36,913 | 37,340 | ..... | 427 | ..... |
| Skelp Iron,* ..... | 101,235 | 126,961 | ..... | $25,726 | ..... | ..... |

*Plant not in operation in 1894.

*facturing in Pennsylvania.*

| WAGES. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. |
| $7,757 | $11,180 | $18,937 | ..... | ..... | ..... | 04⅛ | 06¼ | 10¼ | $383 | $343 | $380 |
| 20,000 | 35,000 | 55,000 | ..... | ..... | ..... | 12½ | 25 | 34⅓ | 400 | 430 | 350 |
| ..... | 21,000 | 21,000 | ..... | ..... | ..... | ..... | ..... | ..... | 350 | 323 | ..... |
| 43,053 | 31,430 | 74,483 | ..... | ..... | ..... | 25 | 24¾ | 43¾ | 486 | 422 | 319 |
| 2,052 | 11,784 | 13,836 | ..... | ..... | ..... | 04⅔ | 29 | 32⅓ | 356 | 354 | 263 |
| 95,692 | 49,605 | 145,297 | ..... | ..... | ..... | 37 | 30¾ | 56½ | 470 | 417 | 354 |
| 39,000 | 16,765 | 55,765 | ..... | ..... | ..... | 30 | 18⅜ | 42⅞ | 461 | 419 | 358 |
| ..... | 14,175 | 14,105 | 001 | ..... | ..... | ..... | 23¾ | 23⅔ | 597 | 540 | 434 |
| 8,908 | 49,173 | 58,081 | ..... | ..... | ..... | 02⅔ | 14⅞ | 17¼ | 369 | 340 | 310 |
| 21,000 | 38,212 | 59,212 | ..... | ..... | ..... | 15¾ | 34⅛ | 44½ | 446 | 442 | 399 |
| 68,572 | ..... | 56,117 | ..... | 05⅔ | ..... | 32½ | ..... | 28⅔ | 435 | 411 | 374 |
| 104,402 | 35,616 | 140,018 | ..... | ..... | ..... | 46 | 29⅞ | 62¾ | 467 | 425 | 426 |
| 8,564 | ..... | 8,541 | ..... | 001¼ | ..... | 23⅔ | ..... | 23⅔ | 382 | 346 | 370 |
| 53,523 | ..... | 27,590 | ..... | 77⅓ | ..... | 61½ | ..... | 31¾ | 425 | 329 | 456 |
| 180,319 | 91,074 | 271,393 | ..... | ..... | ..... | 55⅔ | 63⅔ | 71⅓ | 434 | 434 | 200 |
| 16,823 | 34,352 | 51,175 | ..... | ..... | ..... | 32 | ..... | ..... | 419 | 307 | ..... |
| 33,695 | 85,041 | 118,736 | ..... | ..... | ..... | 21 | 67 | 74¼ | 444 | 444 | 498 |
| 58,002 | 108,606 | 166,608 | ..... | ..... | ..... | 35 | ..... | ..... | 441 | 290 | ..... |
| 980 | 11,091 | 12,071 | ..... | ..... | ..... | 04⅔ | 58 | 60 | 191 | 191 | 101 |
| 26,341 | 18,050 | 44,391 | ..... | ..... | ..... | 36½ | 39⅓ | 61½ | 472 | 420 | 397 |
| 15,896 | 2,513 | 18,409 | ..... | ..... | ..... | 33 | 07¾ | 38½ | 480 | 321 | 329 |
| ..... | 8,732 | 3,182 | 30 | ..... | ..... | ..... | 36⅓ | 17¼ | 231 | 300 | 191 |
| 5,430 | ..... | 5,003 | ..... | 01⅙ | ..... | 12¾ | ..... | 11⅔ | 423 | 480 | 461 |
| ..... | 126,961 | 101,235 | 25⅓ | ..... | ..... | ..... | ..... | ..... | 244 | 273 | ..... |

*Statistics Relating to Manu*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| Bolts, Nuts and Washers, | $51,773 | $57,195 | $41,452 | $5,422 | ..... | ..... |
| Cars, Car Wheels, Castings, &c., | 58,304 | 46,856 | 37,800 | ..... | ..... | ..... |
| Janney Car Coupler, | 361,338 | 281,375 | 160,978 | ..... | ..... | ..... |
| Springs, | 139,800 | 104,498 | 49,664 | ..... | ..... | ..... |
| Brass and Copper Tubes, | 22,052 | 28,512 | 27,603 | 6,460 | ..... | $5,551 |
| Bar Iron, | 95,863 | 90,551 | 60,231 | ..... | ..... | ..... |
| Bar Iron, | 78,600 | 69,311 | 37,000 | ..... | ..... | ..... |
| Stoves, | 51,015 | 44,074 | 27,575 | ..... | ..... | ..... |
| Stoves, Furnaces and Ranges, | 86,874 | 85,374 | 57,746 | ..... | ..... | ..... |
| Pig Iron,* | 39,995 | 25,864 | ..... | ..... | ..... | ..... |
| Bridges, Buildings, &c., | 110,193 | 82,608 | 62,810 | ..... | ..... | ..... |
| Bridges, &c., | 68,556 | 68,564 | 52,404 | 8 | ..... | ..... |
| Structural Work, | 119,966 | 106,684 | 69,475 | ..... | ..... | ..... |
| Iron and Steel Construction, | 307,922 | 287,303 | 186,941 | ..... | ..... | ..... |
| Iron Foundry and Construction, | 81,306 | 63,503 | 39,300 | ..... | ..... | ..... |
| Light Locomotives, | 174,625 | 174,578 | 126,015 | ..... | ..... | ..... |
| Boiler, Tank and Plate Iron Work, | 40,425 | 40,019 | 29,042 | ..... | ..... | ..... |
| Sheet Iron, Sheet Steel, &c., | 93,062 | 93,538 | 90,518 | 476 | ..... | ..... |
| Iron and Steel Sheets, | 541,159 | 410,593 | 441,737 | ..... | $31,144 | ..... |
| Sheet Iron and Sheet Steel, | 219,525 | 191,175 | 199,085 | ..... | 7,910 | ..... |
| Merchant Bar Iron, Steel, &c., | 297,294 | 222,975 | 135,834 | ..... | ..... | ..... |
| Iron and Steel Rolling Mills, | 287,471 | 195,655 | 147,698 | ..... | ..... | ..... |
| Iron and Steel Works, | 2,263,149 | 2,045,925 | 1,722,462 | ..... | ..... | ..... |
| Bar Iron, Nails and Pig Iron, | 147,518 | 113,549 | 83,775 | ..... | ..... | ..... |
| Bar Steel and Railroad and Boat Spikes, | 241,829 | 158,918 | 147,629 | ..... | ..... | ..... |

*Plant not in operation in 1894.

*facturing in Pennsylvania.*

| WAGES. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
| 1893 from 1892 | 1894 from 1893. | 1894 from 1892 | 1893 over 1892. | 1894 over 1893 | 1894 over 1892. | 1893 from 1892 | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894 |
| ..... | $15,743 | $10,321 | 10½ | ..... | ..... | ..... | 27⅔ | 20 | $383 | $327 | $345 |
| $11,448 | 9,056 | 20,504 | ..... | ..... | ..... | 19½ | 19⅓ | 35⅛ | 376 | 342 | 319 |
| 79,963 | 120,397 | 200,360 | ..... | ..... | ..... | 22 | 42¾ | 55½ | 545 | 494 | 387 |
| 75,302 | 54,834 | 90,136 | ..... | ..... | ..... | 25 | 52½ | 64½ | 675 | 559 | 460 |
| ..... | 909 | ..... | 29⅓ | ..... | 25½ | ..... | 03¼ | ..... | 385 | 380 | 460 |
| 5,312 | 30,320 | 35,632 | ..... | ..... | ..... | 05½ | 33½ | 37¼ | 383 | 362 | 241 |
| 9,289 | 32,311 | 41,600 | ..... | ..... | ..... | 12 | 46⅔ | 53 | 573 | 341 | 185 |
| 6,941 | 16,499 | 23,440 | ..... | ..... | ..... | 13½ | 37½ | 46 | 436 | 400 | 250 |
| 1,500 | 27,628 | 29,128 | ..... | ..... | ..... | 01¾ | 32⅜ | 33½ | 483 | 474 | 321 |
| 14,131 | 25,864 | 39,995 | ..... | ..... | ..... | 35⅓ | ..... | ..... | 421 | 349 | ..... |
| 27,585 | 19,798 | 47,383 | ..... | ..... | ..... | 25 | 23⅞ | 43 | 551 | 551 | 365 |
| ..... | 16,160 | 16,152 | ..... | ..... | ..... | ..... | 23⅔ | 23½ | 445 | 442 | 429 |
| 13,282 | 37,209 | 50,491 | ..... | ..... | ..... | 11 | 35 | 42⅛ | 469 | 426 | 570 |
| 20,619 | 100,362 | 120,981 | ..... | ..... | ..... | 06⅔ | 35 | 39⅓ | 534 | 537 | 483 |
| 17,803 | 24,203 | 42,006 | ..... | ..... | ..... | 22 | 38⅛ | 51⅔ | 502 | 423 | 293 |
| 47 | 48,563 | 48,610 | ..... | ..... | ..... | ..... | 28 | 27¾ | 669 | 632 | 570 |
| 406 | 10,977 | 10,983 | ..... | ..... | ..... | 01 | 27¼ | 02⅔ | 404 | 400 | 387 |
| ..... | 3,020 | 2,544 | .005 | ..... | ..... | ..... | 03¼ | 02⅔ | 582 | 585 | 566 |
| 150,566 | ..... | 99,422 | ..... | 07½ | ..... | 24 | ..... | 18⅓ | 689 | 622 | 598 |
| 28,350 | ..... | 20,440 | ..... | 04⅛ | ..... | 13 | ..... | 09⅓ | 585 | 510 | 531 |
| 74,319 | 87,141 | 161,460 | ..... | ..... | ..... | 25 | 39⅛ | 54½ | 743 | 490 | 340 |
| 91,816 | 47,957 | 139,773 | ..... | ..... | ..... | 32 | 24⅝ | 48½ | 798 | 612 | 461 |
| 237,224 | 323,463 | 540,687 | ..... | ..... | ..... | 09½ | 15¾ | 24 | 637 | 683 | 534 |
| 33,969 | 29,774 | 63,743 | ..... | ..... | ..... | 23 | 26¼ | 43¼ | 394 | 361 | 272 |
| 82,911 | 11,289 | 94,200 | ..... | ..... | ..... | 34 | 07 | 39 | 1,007 | 810 | 781 |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| Malleable Iron Foundry, ..... | $76,809 | $65,092 | $53,628 | ..... | ..... | ..... |
| Wrought Iron Pipe, ..... | 379,476 | 307,097 | 332,844 | ..... | $25,747 | ..... |
| Sheet Iron, ..... | 612,415 | 514,686 | 389,720 | ..... | ..... | ..... |
| Sheet Iron and Sheet Steel, .... | 124,938 | 116,574 | 127,083 | ..... | 10,509 | $2,145 |
| Sheet Iron and Sheet Steel, ... | 114,900 | 95,760 | 95,505 | ..... | ..... | ..... |
| Steel, ..... | 336,309 | 261,625 | 190,444 | ..... | ..... | ..... |
| Steel, ..... | 608,203 | 440,000 | 351,219 | ..... | ..... | ..... |
| Steel Works, ..... | 262,000 | 234,000 | 216,744 | ..... | ..... | ..... |
| Iron and Steel Works, ..... | 422,615 | 179,825 | 63,251 | ..... | ..... | ..... |
| Crucibles, ..... | 20,000 | 18,000 | 18,000 | ..... | ..... | ..... |
| Iron and Steel Hardware, &c., | 1,334,864 | 829,985 | 481,639 | ..... | ..... | ..... |
| Crucibles and Open Hearth Steel, ..... | 413,419 | 267,338 | 213,859 | ..... | ..... | ..... |
| Iron, ..... | 126,720 | 71,604 | 23,600 | ..... | ..... | ..... |
| Iron, ..... | 620,000 | 390,000 | 215,000 | ..... | ..... | ..... |
| Rolling Skelp Iron, ..... | 215,738 | 148,195 | 89,928 | ..... | ..... | ..... |
| Iron and Steel, Hoop Bands, &c., ..... | 158,704 | 133,173 | 66,499 | ..... | ..... | ..... |
| Brass Founders, Iron Pipe, &c., ..... | 72,653 | 65,569 | 53,498 | ..... | ..... | ..... |
| Rolling Mill Machinery, ..... | 65,622 | 44,672 | 23,744 | ..... | ..... | ..... |
| Foundry and Machine Shops, ... | 76,052 | 54,064 | 40,211 | ..... | ..... | ..... |
| Brass Founders, Machinists, &c., ..... | 46,108 | 47,065 | 46,323 | $957 | ..... | 215 |
| Iron and Steel, ..... | 463,996 | 460,195 | 452,068 | ..... | ..... | ..... |
| Pig Metal, ..... | 116,917 | 130,245 | 102,775 | 13,328 | ..... | ..... |
| Founders and Machinists, ..... | 148,992 | 72,459 | 89,318 | ..... | 16,859 | ..... |
| General Machinery, ..... | 175,376 | 155,044 | 117,881 | ..... | ..... | ..... |
| Engines and Boilers, ..... | 336,202 | 320,403 | 239,413 | ..... | ..... | ..... |
| Boilers, ..... | 40,220 | 42,316 | 32,000 | 2,096 | ..... | ..... |
| Radiators, ..... | 28,532 | 32,958 | 32,234 | 4,426 | ..... | 3,702 |
| Iron Products, ..... | 800,999 | 733,145 | 585,612 | ..... | ..... | ..... |

*facturing in Pennsylvania.*

| WAGES. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. |
| $11,717 | $11,464 | $23,181 | ..... | ..... | ..... | 15 | 17⅔ | 30¼ | $569 | $525 | $455 |
| 72,379 | ..... | 46,632 | ..... | 08⅓ | ..... | 19 | ..... | 12⅓ | 446 | 384 | 416 |
| 37,729 | 124,966 | 222,695 | ..... | ..... | ..... | 16 | 24⅓ | 36⅓ | 630 | 530 | 459 |
| 8,364 | ..... | ..... | ..... | 09 | 01⅔ | 06⅔ | ..... | ..... | 710 | 520 | 567 |
| 19,140 | 255 | 19,395 | ..... | ..... | ..... | 16½ | 002⅔ | 17 | 766 | 660 | 636 |
| 74,684 | 71,181 | 145,865 | ..... | ..... | ..... | 22 | 27¼ | 43½ | 672 | 654 | 476 |
| 168,203 | 88,781 | 256,984 | ..... | ..... | ..... | 27⅔ | 20¼ | 42¼ | 750 | 783 | 750 |
| 28,000 | 16,744 | 45,256 | ..... | ..... | ..... | 10⅔ | 71⅞ | 17¼ | 557 | 532 | 532 |
| 242,790 | 116,574 | 359,364 | ..... | ..... | ..... | 57 | 65 | 85 | 653 | 603 | 632 |
| 2,000 | ..... | 2,000 | ..... | ..... | ..... | 10 | ..... | 10 | 714 | 720 | 720 |
| 504,879 | 348,346 | 853,225 | ..... | ..... | ..... | 37¾ | 42 | 64 | 529 | 498 | 442 |
| 146,081 | 53,479 | 199,560 | ..... | ..... | ..... | 35 | 20 | 48½ | 677 | 632 | 534 |
| 55,116 | 48,004 | 103,120 | ..... | ..... | ..... | 43 | 67⅓ | 81⅞ | 507 | 409 | 135 |
| 230,000 | 175,000 | 405,000 | ..... | ..... | ..... | 37 | 45 | 65⅓ | 775 | 780 | 717 |
| 67,543 | 58,267 | 125,810 | ..... | ..... | ..... | 31⅓ | 39¼ | 58½ | 461 | 242 | 169 |
| 25,531 | 66,674 | 92,205 | ..... | ..... | ..... | 16 | 50 | 58 | 496 | 522 | 443 |
| 7,084 | 12,071 | 19,155 | ..... | ..... | ..... | 09⅔ | 18⅓ | 26⅓ | 749 | 754 | 652 |
| 20,950 | 20,928 | 44,878 | ..... | ..... | ..... | 32 | 47 | 63¾ | 683 | 687 | 539 |
| 21,988 | 13,853 | 35,841 | ..... | ..... | ..... | 29 | 25⅔ | 47⅛ | 667 | 587 | 402 |
| ..... | 742 | ..... | 02 | ..... | .005 | ..... | 01½ | ..... | 688 | 692 | 602 |
| 3,801 | 8,127 | 115,928 | ..... | ..... | ..... | 008 | 17¾ | 25¾ | 608 | 566 | 551 |
| ..... | 27,470 | 14,142 | 11 | ..... | ..... | ..... | 21 | 12 | 622 | 668 | 514 |
| 76,533 | ..... | 59,674 | ..... | 23¼ | ..... | 51 | ..... | 40¾ | 689 | 578 | 599 |
| 20,332 | 37,163 | 57,495 | ..... | ..... | ..... | 11⅝ | 24 | 32¾ | 525 | 538 | 567 |
| 15,799 | 80,990 | 96,789 | ..... | ..... | ..... | 04⅔ | 25¼ | 28⅔ | 570 | 534 | 569 |
| ..... | 10,316 | 8,220 | 05 | ..... | ..... | ..... | 24⅓ | 24⅓ | 502 | 423 | 400 |
| ..... | 724 | ..... | 15 | ..... | 13 | ..... | 02¼ | ..... | 370 | 326 | 329 |
| 67,854 | 147,533 | 215,387 | ..... | ..... | ..... | 08½ | 20⅛ | 26⅞ | 436 | 432 | 408 |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893 | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| Axles, | $10,480 | $9,000 | $7,711 | ..... | ..... | ..... |
| Roll Foundry, | 85,147 | 99,858 | 79,114 | $14,711 | ..... | ..... |
| Iron Foundry, | 23,077 | 12,039 | 14,638 | ..... | $2,590 | ..... |
| Foundry, | 53,685 | 52,199 | 49,397 | ..... | ..... | ..... |
| Iron Foundry, | 27,279 | 24,157 | 12,207 | ..... | ..... | ..... |
| Rolling Mill and Tin Plate Machinery, &c., | 48,890 | 53,865 | 44,568 | 4,975 | ..... | ..... |
| Iron, Steel and Brass Castings, &c., | 265,191 | 215,807 | 136,813 | ..... | ..... | ..... |
| Pig Iron, | 197,063 | 156,623 | 115,365 | ..... | ..... | ..... |
| Steel Castings, | 77,180 | 32,060 | 40,560 | ..... | 8,500 | ..... |
| Steel Castings, | 328,766 | 256,943 | 201,547 | ..... | ..... | ..... |
| Merchant Bar Iron, | 297,043 | 213,470 | 107,170 | ..... | ..... | ..... |
| Steel and Copper, | 1,155,059 | 991,332 | 897,171 | ..... | ..... | ..... |
| Iron Beams, Girders, &c., | 63,258 | 66,713 | 60,005 | 3,455 | ..... | ..... |
| Iron Founders, | 75,000 | 67,500 | 22,057 | ..... | ..... | ..... |
| Iron Founders, | 204,000 | 136,000 | 123,000 | ..... | ..... | ..... |
| Stoves, | 30,804 | 27,503 | 17,432 | ..... | ..... | ..... |
| Iron Founders, | 67,480 | 71,208 | 80,235 | 3,728 | 9,027 | $12,755 |
| Boiler Makers, | 25,300 | 30,250 | 35,175 | 4,950 | 4,925 | 9,875 |
| Iron Founders, | 145,860 | 85,940 | 114,792 | ..... | 28,852 | ..... |
| Boiler Makers, | 75,000 | 38,000 | 11,500 | ..... | ..... | ..... |
| Boiler Makers,* | 163,750 | 97,470 | ..... | ..... | ..... | ..... |
| Engines, | 80,000 | 60,000 | 25,000 | ..... | ..... | ..... |
| Malleable Iron Castings, | 130,350 | 102,552 | 76,006 | ..... | ..... | ..... |
| Engines and Oil Well Supplies, | 89,814 | 61,763 | 57,090 | ..... | ..... | ..... |
| Engines, | 29,000 | 24,000 | 28,000 | ..... | 4,000 | ..... |
| Boiler Works, | 40,775 | 32,795 | 17,462 | ..... | ..... | ..... |
| Engines, | 35,000 | 32,000 | 20,000 | ..... | ..... | ..... |
| **Iron Works,** | **375,000** | **312,000** | **302,000** | ..... | ..... | ..... |
| Blast Furnace, | 29,640 | 25,580 | 27,108 | ..... | 1,528 | ..... |

*Plant not in operation in 1894.

*facturing in Pennsylvania.*

WAGES.

| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892 | 1892. | 1893 | 1894. |
| $1,480 | $1,289 | $2,769 | ..... | ..... | ..... | 14¼ | 14⅓ | 26⅓ | $582 | $600 | $551 |
| ..... | 20,744 | 6,033 | 17 | ..... | ..... | ..... | 20¾ | 07⅞ | 670 | 620 | 557 |
| 41,038 | ..... | 9,439 | ..... | 21⅔ | ..... | 47½ | ..... | 41 | 461 | 401 | 488 |
| 1,486 | 2,802 | 4,288 | ..... | ..... | ..... | 03 | 05⅓ | 08 | 549 | 488 | 466 |
| 3,122 | 11,950 | 15,072 | ..... | ..... | ..... | 11½ | 49½ | 55½ | 593 | 568 | 370 |
| ..... | 9,297 | 4,322 | 10 | ..... | ..... | ..... | 05⅓ | 88⅓ | 543 | 513 | 445 |
| 49,384 | 78,994 | 128,378 | ..... | ..... | ..... | 18½ | 36½ | 48½ | 619 | 598 | 448 |
| 40,440 | 41,258 | 81,698 | ..... | ..... | ..... | 20½ | 26⅓ | 41½ | 703 | 678 | 577 |
| 45,120 | ..... | 36,620 | ..... | 26½ | ..... | 58½ | ..... | 47½ | 495 | 433 | 451 |
| 71,823 | 55,396 | 127,219 | ..... | ..... | ..... | 21⅔ | 21½ | 38⅔ | 678 | 625 | 504 |
| 83,573 | 106,300 | 189,873 | ..... | ..... | ..... | 28 | 49½ | 64 | 660 | 474 | 306 |
| 163,727 | 94,161 | 257,888 | ..... | ..... | ..... | 14 | 95 | 22⅓ | 538 | 483 | 472 |
| ..... | 6,708 | 3,253 | 05½ | ..... | ..... | ..... | 10 | 05⅙ | 639 | 629 | 550 |
| 7,500 | 45,443 | 52,943 | ..... | ..... | ..... | 10 | 67⅓ | 70⅔ | 600 | 540 | 480 |
| 68,000 | 13,000 | 81,000 | ..... | ..... | ..... | 33⅓ | 09½ | 39⅔ | 606 | 494 | 600 |
| 3,301 | 10,071 | 13,372 | ..... | ..... | ..... | 10⅔ | 03⅔ | 43⅓ | 570 | 550 | 348 |
| ..... | ..... | ..... | 05½ | 12⅔ | 19 | ..... | ..... | ..... | 527 | 523 | 501 |
| ..... | ..... | ..... | 19½ | 16¼ | 39 | ..... | ..... | ..... | 506 | 521 | 540 |
| 59,920 | ..... | 3 1,068 | ..... | 33⅝ | ..... | 41 | ..... | 21⅓ | 660 | 491 | 765 |
| 37,000 | 27,000 | 64,000 | ..... | ..... | ..... | 49⅓ | 71⅔ | 85⅓ | 625 | 475 | 440 |
| 66,280 | 97,470 | 163,750 | ..... | ..... | ..... | 40½ | ..... | ..... | 618 | 528 | ..... |
| 20,000 | 35,000 | 55,000 | ..... | ..... | ..... | 25 | 58⅓ | 69 | 666 | 800 | 532 |
| 27,798 | 26,546 | 54,344 | ..... | ..... | ..... | 21 | 26 | 41¾ | 499 | 431 | 434 |
| 28,051 | 4,673 | 32,724 | ..... | ..... | ..... | 32½ | 07½ | 36¾ | 579 | 486 | 457 |
| 5,000 | ..... | 1,000 | ..... | 16⅔ | ..... | 17 | ..... | 03½ | 527 | 600 | 560 |
| 7,980 | 15,333 | 23,313 | ..... | ..... | ..... | 19½ | 47 | 57¼ | 679 | 669 | 546 |
| 3,000 | 12,000 | 15,000 | ..... | ..... | ..... | 08½ | 37½ | 43 | 500 | 457 | 286 |
| 63,000 | 10,000 | 73,000 | ..... | ..... | ..... | 16⅔ | 03¼ | 19½ | 493 | 427 | 432 |
| 4,060 | ..... | 2,532 | ..... | 06 | ..... | 13⅔ | .... | 85½ | 296 | 255 | 194 |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| Iron. | $29,599 | $28,812 | $15,265 | ..... | ..... | ..... |
| Iron Works,* | 307,521 | 263,905 | ..... | ..... | ..... | ..... |
| Pig and Skelp Iron. | 150,220 | 90,900 | 48,395 | ..... | ..... | ..... |
| Muck Bar and Nails (Iron), | 20,473 | 16,725 | 38,060 | ..... | $21,335 | $17,587 |
| Steam Boilers, | 40,987 | 40,201 | 37,936 | ..... | ..... | ..... |
| Iron and Steel, | 3,742,230 | 2,853,826 | 2,235,820 | ..... | ..... | ..... |
| Iron, | 58,700 | 59,500 | 49,165 | $800 | ..... | ..... |
| Foundry and Machine Shop, | 17,722 | 14,298 | 17,583 | ..... | 3,285 | ..... |
| Iron Foundry, | 67,330 | 45,148 | 33,428 | ..... | ..... | ..... |
| Rolling Mill, | 135,917 | 115,570 | 112,583 | ..... | ..... | ..... |
| Pig Iron, | 249,976 | 209,050 | 148,404 | ..... | ..... | ..... |
| Pig Iron, Merchant, Bar, &c., | 282,974 | 203,512 | 194,628 | ..... | ..... | ..... |
| Locomotives, | 2,778,320 | 2,742,760 | 1,116,942 | ..... | ..... | ..... |
| Rolling Mill Machinery, | 35,486 | 32,804 | 17,746 | ..... | ..... | ..... |
| Iron and Steel, | 7,271,525 | 7,283,854 | 6,442,192 | 12,329 | ..... | ..... |
| Steel Rails, Billets, &c., | 1,079,420 | 670,220 | 660,951 | ..... | ..... | ..... |
| Steel, | 224,930 | 118,678 | 35,692 | ..... | ..... | ..... |
| Repairing and Building Passenger and Freight Cars, | 1,285,412 | 1,145,593 | 991,207 | ..... | ..... | ..... |
| New Locomotives and Repairs, | 1,909,294 | 1,750,618 | 1,500,738 | ..... | ..... | ..... |
| Acid Open Hearth Steel Plates and Sheets, | 204,220 | 263,640 | 235,135 | 59,420 | ..... | 30,915 |
| Boilers, Plate and Sheet Iron Work, | 13,209 | 15,780 | 14,337 | 2,571 | ..... | 1,128 |
| Bar Iron, Railroad Spikes, &c., | 22,743 | 23,810 | 29,728 | 1,067 | 6,118 | 7,185 |
| Locomotives, | 529,768 | 461,709 | 294,808 | ..... | ..... | ..... |
| Merchant Iron, | 95,843 | 59,959 | 35,561 | ..... | ..... | ..... |
| Bar Iron, | 81,240 | 70,100 | 53,150 | ..... | ..... | ..... |
| Steel-tired Car Wheels, | 28,855 | 23,026 | 12,078 | ..... | ..... | ..... |
| Drop-Forgings, | 28,047 | 21,208 | 24,023 | ..... | 2,815 | ..... |
| Stoves, Ranges and Furnaces, | 185,000 | 210,000 | 160,638 | 25,000 | ..... | ..... |

*Plant not in operation in 1894.

*facturing in Pennsylvania.*

WAGES.

| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. |
| $787 | $13,547 | $14,334 | ..... | ..... | ..... | 02½ | 47 | 48½ | $356 | $360 | $212 |
| 43,616 | 263,905 | 307,521 | ..... | ..... | ..... | 14 | ..... | ..... | 640 | 581 | ..... |
| 60,220 | 41,605 | 101,825 | ..... | ..... | ..... | 40 | 46¼ | 68 | 390 | 360 | 205 |
| 2,748 | ..... | ..... | ..... | 127¾ | 86 | 18 | ..... | ..... | 170 | 239 | 380 |
| 786 | 2,265 | 3,051 | ..... | ..... | ..... | 01⅔ | 05⅔ | 07⅓ | 546 | 536 | 506 |
| 888,414 | 618,006 | 1,506,420 | ..... | ..... | ..... | 23⅓ | 21⅔ | 40¼ | 499 | 495 | 399 |
| ..... | 10,335 | 9,535 | 01½ | ..... | ..... | ..... | 01¾ | 16¼ | 519 | 496 | 428 |
| 3,424 | ..... | 139 | ..... | 23 | ..... | 19⅓ | ..... | 008 | 506 | 476 | 518 |
| 22,242 | 11,720 | 33,962 | ..... | ..... | ..... | 33 | 26 | 50½ | 607 | 480 | 492 |
| 20,347 | 2,987 | 23,334 | ..... | ..... | ..... | 15 | 02⅔ | 15⅔ | 503 | 485 | 511 |
| 40,924 | 60,646 | 101,570 | ..... | ..... | ..... | 16½ | 29 | 40⅔ | 454 | 564 | 416 |
| 79,462 | 8,874 | 88,336 | ..... | ..... | ..... | 28 | 04⅓ | 31¼ | 327 | 296 | 255 |
| 35,560 | 1,625,818 | 1,661,378 | ..... | ..... | ..... | 01⅓ | 59⅓ | 60 | 688 | 635 | 519 |
| 2,682 | 15,058 | 17,740 | ..... | ..... | ..... | 07½ | 46 | 50⅛ | 612 | 575 | 467 |
| ..... | 841,662 | 829,333 | 01⅓ | ..... | ..... | ..... | 11⅔ | 11¼ | 658 | 617 | 565 |
| 409,200 | 9,269 | 418,269 | ..... | ..... | ..... | 38 | 01⅓ | 38¾ | 358 | 425 | 443 |
| 106,252 | 82,986 | 189,238 | ..... | ..... | ..... | 47 | 70 | 84½ | 548 | 544 | 297 |
| 139,819 | 154,386 | 294,205 | ..... | ..... | ..... | 10½ | 13½ | 23 | 611 | 539 | 490 |
| 158,676 | 249,882 | 408,558 | ..... | ..... | ..... | 08⅓ | 14¼ | 21⅓ | 588 | 525 | 496 |
| ..... | 28,505 | ..... | 29 | ..... | 15⅛ | ..... | 10⅞ | ..... | 523 | 526 | 443 |
| ..... | 1,443 | ..... | 19 | ..... | 08½ | ..... | 09⅛ | ..... | 440 | 526 | 573 |
| ..... | ..... | ..... | 04⅔ | 25⅔ | 31½ | ..... | ..... | ..... | 505 | 476 | 521 |
| 78,059 | 166,901 | 243,960 | ..... | ..... | ..... | 13 | 36¼ | 44½ | 611 | 533 | 447 |
| 35,884 | 24,398 | 60,282 | ..... | ..... | ..... | 37½ | 40¾ | 63 | 618 | 495 | 332 |
| 11,140 | 16,950 | 28,090 | ..... | ..... | ..... | 13⅔ | 24¼ | 30⅞ | 338 | 311 | 287 |
| 5,829 | 10,9[illegible] | 16,777 | ..... | ..... | ..... | 20 | 47½ | 58 | 379 | 371 | 335 |
| 6,839 | ..... | 4,024 | ..... | 13¼ | ..... | 24½ | ..... | 14⅓ | 492 | 415 | 511 |
| ..... | 49,362 | 24,362 | 13½ | ..... | ..... | ..... | 23⅓ | 13⅛ | 528 | 525 | 556 |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| Car Wheels, Car Axles and Cars, | $163,585 | $26,200 | $30,062 | ..... | $3,862 | ..... |
| Locomotives, Stationary Engines, Boilers, &c., | 392,650 | 328,689 | 207,795 | ..... | ..... | ..... |
| Merchant Iron, | 898,056 | 753,203 | 414 287 | ..... | ..... | ..... |
| Iron Works, | 173,000 | 130,000 | 105,000 | ..... | ..... | ..... |
| Iron Foundry, | 219,876 | 197,617 | 190,000 | ..... | ..... | ..... |
| Tools, | 104,349 | 96,755 | 76,314 | ..... | ..... | ..... |
| Car Wheels, | 112,379 | 93,984 | 79,858 | ..... | ..... | ..... |
| Stoves, Heaters, Ranges, &c., | 103,550 | 120,030 | 95,422 | $16,480 | ..... | ..... |
| Power Transmitting Machinery, | 126,110 | 123,034 | 93,647 | ..... | ..... | ..... |
| Boiler and Tank Plates, | 47,082 | 33,863 | 16,026 | ..... | ..... | ..... |
| Foundry and Machine Shop, | 24,308 | 19,742 | 12,527 | ..... | ..... | ..... |
| Machine Tools and Steam Hammers, | 437,119 | 426,445 | 205,357 | ..... | ..... | ..... |
| Pig Iron, | 274,152 | 190,497 | 135,696 | ..... | ..... | ..... |
| Foundry and Machinery, | 135,000 | 120,000 | 136,000 | ..... | 16,000 | $1,000 |
| Pig Iron, Cut Nails, &c., | 192,627 | 187,111 | 83,333 | ..... | ..... | ..... |
| Iron and Steel Nails, &c., | 817,687 | 527,302 | 212,543 | ..... | ..... | ..... |
| Bar Iron and Forgings, | 61,665 | 48,570 | 29,826 | ..... | ..... | ..... |
| Stoves, Ranges, &c., | 77,465 | 75,906 | 74,594 | ..... | ..... | ..... |
| Boilers, | 13,237 | 18,697 | 20,465 | 5,460 | 1,768 | 7,228 |
| Steam Engines and Boilers, | 17,000 | 15,000 | 12,000 | ..... | ..... | ..... |
| Saws, Tools, &c., | 562,262 | 477,934 | 434,279 | ..... | ..... | ..... |
| Files, | 112,898 | 103,365 | 99,514 | ..... | ..... | ..... |
| Cast Iron Pipe, | 71,442 | 78,320 | 73,618 | 6,878 | ..... | 2,176 |
| Car Wheels, &c., | 275,689 | 225,077 | 65,438 | ..... | ..... | ..... |
| Foundry, | 38,083 | 45,905 | 28,742 | 7,822 | ..... | ..... |
| Merchant Bar Iron, | 69,025 | 70,170 | 53,035 | 1,145 | ..... | ..... |
| Railroad Equipment, &c., | 142,056 | 98,072 | 57,877 | ..... | ..... | ..... |
| Wrought Iron Pipe, | 15,653 | 13,734 | 6,348 | ..... | ..... | ..... |
| Blast Furnace, | 136,701 | 98,434 | 81,872 | ..... | ..... | ..... |

*facturing in Pennsylvania.*

WAGES.

| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. |
| $137,385 | ..... | $133,523 | ..... | 14⅔ | ..... | 84 | ..... | 82 | $342 | $312 | $316 |
| 63,961 | $120,894 | 184,855 | ..... | ..... | ..... | 16⅓ | 36⅔ | 47⅓ | 490 | 410 | 403 |
| 144,853 | 338,916 | 483,769 | ..... | ..... | ..... | 16⅓ | 45 | 53⅞ | 493 | 510 | 451 |
| 43,000 | 25,000 | 68,000 | ..... | ..... | ..... | 25 | 11 | 39⅓ | 692 | 650 | 600 |
| 22,259 | 7,617 | 29,876 | ..... | ..... | ..... | 10⅓ | 03¾ | 13½ | 578 | 534 | 543 |
| 7,594 | 20,441 | 28,035 | ..... | ..... | ..... | 07¼ | 21⅓ | 27 | 458 | 424 | 329 |
| 28,395 | 14,126 | 32,521 | ..... | ..... | ..... | 16½ | 15 | 29 | 540 | 499 | 509 |
| ..... | 24,608 | 8,128 | 16 | ..... | ..... | ..... | 20½ | 07¾ | 639 | 622 | 536 |
| 3,076 | 29,387 | 32,463 | ..... | ..... | ..... | 02½ | 23⅞ | 25¾ | 420 | 424 | 452 |
| 13,219 | 17,837 | 31,056 | ..... | ..... | ..... | 28 | 52⅔ | 66 | 541 | 423 | 381 |
| 4,566 | 7,215 | 11,781 | ..... | ..... | ..... | 18⅔ | 36½ | 48½ | 506 | 548 | 482 |
| 10,674 | 221,088 | 231,762 | ..... | ..... | ..... | 02⅓ | 51⅞ | 53 | 633 | 638 | 503 |
| 83,655 | 54,801 | 138,456 | ..... | ..... | ..... | 30½ | 28¾ | 50½ | 521 | 483 | 449 |
| 35,000 | ..... | ..... | ..... | 13⅓ | 107½ | 11⅓ | ..... | ..... | 421 | 436 | 405 |
| 5,516 | 103,778 | 109,294 | ..... | ..... | ..... | 02¾ | 35½ | 57 | 370 | 393 | 194 |
| 290,385 | 314,759 | 605,144 | ..... | ..... | ..... | 35½ | 60 | 74 | 518 | 495 | 351 |
| 13,095 | 18,744 | 31,839 | ..... | ..... | ..... | 21½ | 38¾ | 51⅔ | 518 | 445 | 397 |
| 1,559 | 1,312 | 2,871 | ..... | ..... | ..... | 02 | 01¾ | 03¾ | 469 | 393 | 385 |
| ..... | ..... | ..... | 41¼ | 09½ | 54¾ | ..... | ..... | ..... | 529 | 584 | 553 |
| 2,000 | 3,000 | 5,000 | ..... | ..... | ..... | 11¾ | 20 | 29⅓ | 320 | 357 | 400 |
| 84,328 | 43,655 | 127,983 | ..... | ..... | ..... | 15 | 09⅓ | 22¾ | 576 | 477 | 434 |
| 9,533 | 3,851 | 13,384 | ..... | ..... | ..... | 08½ | 03¾ | 11⅞ | 501 | 516 | 498 |
| ..... | 4,702 | ..... | 09⅔ | ..... | 03 | ..... | 06 | ..... | 460 | 480 | 438 |
| 50,612 | 159,639 | 210,251 | ..... | ..... | ..... | 18½ | 70⅞ | 76½ | 892 | 970 | 545 |
| ..... | 17,163 | 9,341 | 20½ | ..... | ..... | ..... | 37⅓ | 24½ | 591 | 478 | 452 |
| ..... | 17,135 | 15,990 | 01⅔ | ..... | ..... | ..... | 24½ | 23¼ | 493 | 516 | 378 |
| 43,984 | 40,195 | 84,179 | ..... | ..... | ..... | 31 | 41 | 59¼ | 368 | 301 | 170 |
| 1,919 | 7,386 | 9,305 | ..... | ..... | ..... | 12¼ | 53⅞ | 59½ | 391 | 392 | 334 |
| 38,268 | 16,562 | 54,829 | ..... | ..... | ..... | 27⅞ | 16⅞ | 40 | 506 | 466 | 354 |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| Sheet and Plate Iron and Steel, | $165,300 | $161,780 | $141,200 | ..... | ..... | ..... |
| Cut Nails, | 202,234 | 181,798 | 128,626 | ..... | ..... | ..... |
| Foundry and Machine Work, | 42,801 | 36,014 | 33,284 | ..... | ..... | ..... |
| Chain Works, &c., | 54,200 | 40,000 | 32,076 | ..... | ..... | ..... |
| Metal and Wood, | 42,838 | 41,184 | 20,692 | ..... | ..... | ..... |
| Electric Street Cars, | 55,366 | 75,810 | 26,607 | $20,444 | ..... | ..... |
| Tacks and Nails, | 9,604 | 10,058 | 12,020 | 454 | $1,962 | $2,416 |
| Sheet Steel, Plates, &c., | 157,786 | 133,181 | 131,999 | ..... | ..... | ..... |
| Rails, Bars, Splices, &c., | 45,641 | 68,120 | 10,450 | 22,479 | ..... | ..... |
| Iron and Steel Sheets, | 185,100 | 172,279 | 178,478 | ..... | 6,199 | ..... |
| Street Railway Rails, Switches, &c., | 742,503 | 718,284 | 756,041 | ..... | 24,219 | ..... |
| Merchant Bar Iron, &c., | 20,522 | 11,332 | 34,675 | ..... | 23,343 | 14,153 |
| Ship Building, | 242,358 | 324,439 | 226,858 | 82,081 | ..... | ..... |
| Iron and Nails, | 53,266 | 55,927 | 46,928 | 2,661 | ..... | ..... |
| Foundry and Machine Shop, &c., | 98,428 | 128,965 | 48,920 | 30,537 | ..... | ..... |
| Pig Iron, | 29,003 | 29,155 | 24,635 | 152 | ..... | ..... |
| Steel Castings, | 44,226 | 48,908 | 43,957 | 4,682 | ..... | ..... |
| Wire Nails, | 305,425 | 276,620 | 319,645 | ..... | 43,025 | 14,220 |
| Nails, | 77,288 | 52,412 | 28,102 | ..... | ..... | ..... |
| Blast Furnaces, | 97,042 | 69,600 | 74,631 | ..... | 5,031 | ..... |
| Steel and Plate Iron, &c., | 244,102 | 197,671 | 163,460 | ..... | ..... | ..... |
| Iron and Steel Pipe, &c., | 108,960 | 119,979 | 100,459 | 11,019 | ..... | ..... |
| Bronze and Brass Castings, | 20,000 | 18,000 | 12,000 | ..... | ..... | ..... |
| Steam Engines, Pumping Engines, &c., | 238,365 | 293,972 | 229,166 | 55,607 | ..... | ..... |
| Iron and Steel Bridge Material, | 233,957 | 155,661 | 77,551 | ..... | ..... | ..... |
| Iron and Steel Cut Nails, | 147,963 | 135,347 | 83,471 | ..... | ..... | ..... |
| Cook Stoves, Ranges, &c., | 36,732 | 32,401 | 26,634 | ..... | ..... | ..... |
| Iron and Steel Boilers, &c., | 140,346 | 182,353 | 102,788 | 42,007 | ..... | ..... |

*facturing in Pennsylvania.*

WAGES.

| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892 | 1893. | 1894 |
| $3,520 | $20,589 | $24,100 | ..... | ..... | ..... | 02⅛ | 12⅔ | 14½ | $590 | $599 | $672 |
| 20,436 | 53,172 | 73,608 | ..... | ..... | ..... | 10⅛ | 29¼ | 36⅓ | 430 | 395 | 322 |
| 6,787 | 2,730 | 9,517 | ..... | ..... | ..... | 15⅞ | 07½ | 22¼ | 571 | 554 | 520 |
| 14,200 | 7,924 | 22,124 | ..... | ..... | ..... | 26¼ | 19¾ | 40⅞ | 492 | 333 | 279 |
| 1,654 | 20,492 | 22,146 | ..... | ..... | ..... | 03¾ | 49¾ | 51¾ | 428 | 457 | 460 |
| ..... | 49,203 | 28,759 | 36⅞ | ..... | ..... | ..... | 65 | 52 | 570 | 541 | 682 |
| ..... | ..... | ..... | 04⅔ | 19½ | 25⅛ | ..... | ..... | ..... | 417 | 402 | 445 |
| 24,605 | 1,182 | 25,787 | ..... | ..... | ..... | 15⅔ | 09 | 16⅓ | 689 | 708 | 608 |
| ..... | 57,670 | 35,191 | 49¼ | ..... | ..... | ..... | 84⅔ | 77⅛ | 507 | 619 | 402 |
| 12,821 | ..... | 6,622 | ..... | 03⅔ | ..... | 06⅞ | ..... | 03⅝ | 680 | 683 | 549 |
| 87,757 | ..... | 13,538 | ..... | 03⅓ | ..... | 05 | ..... | 01⅞ | 616 | 608 | 629 |
| 9,190 | ..... | ..... | ..... | 20⅝ | 69 | 44¾ | ..... | ..... | 211 | 106 | 385 |
| ..... | 97,581 | 15,500 | 33⅞ | ..... | ..... | ..... | 30⅔ | 06⅜ | 550 | 556 | 575 |
| ..... | 8,999 | 6,338 | 04⅞ | ..... | ..... | ..... | 16 | 12 | 341 | 363 | 335 |
| ..... | 80,045 | 49,508 | 31 | ..... | ..... | ..... | 62 | 50⅓ | 445 | 458 | 340 |
| ..... | 4,520 | 4,368 | ½ | ..... | ..... | ..... | 15½ | 15 | 439 | 448 | 398 |
| ..... | 4,951 | 269 | 10½ | ..... | ..... | ..... | 10⅛ | 006 | 433 | 461 | 435 |
| 28,805 | ..... | ..... | ..... | 15½ | 04⅔ | 09½ | ..... | ..... | 436 | 363 | 418 |
| 24,876 | 24,310 | 49,186 | ..... | ..... | ..... | 32¼ | 46½ | 63⅔ | 284 | 294 | 209 |
| 27,442 | ..... | 22,411 | ..... | 07¼ | ..... | 40⅞ | ..... | 23⅛ | 388 | 366 | 357 |
| 46,431 | 34,211 | 80,642 | ..... | ..... | ..... | 19 | 17½ | 33 | 536 | 564 | 536 |
| ..... | 19,520 | 8,501 | 10⅛ | ..... | ..... | ..... | 16⅓ | 78 | 374 | 383 | 364 |
| 2,000 | 6,000 | 8,000 | ..... | ..... | ..... | 10 | 33⅓ | 40 | 830 | 818 | 750 |
| ..... | 64,806 | 9,199 | 23⅓ | ..... | ..... | ..... | 22 | 03⅞ | 527 | 587 | 501 |
| 78,296 | 78,110 | 156,406 | ..... | ..... | ..... | 33½ | 50⅛ | 67 | 415 | 374 | 336 |
| 12,616 | 51,876 | 64,492 | ..... | ..... | ..... | 08½ | 38⅓ | 43⅔ | 594 | 360 | 222 |
| 4,331 | 5,767 | 10,098 | ..... | ..... | ..... | 11⅞ | 17⅔ | 27½ | 524 | 432 | 355 |
| ..... | 79,565 | 37,558 | 29⅞ | ..... | ..... | ..... | 43⅔ | 26¾ | 623 | 607 | 342 |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| Pig Iron, | $195,695 | $122,014 | $47,524 | ..... | ..... | ..... |
| Iron and Steel Plates, Tanks, &c., | 133,449 | 130,943 | 139,092 | ..... | $8,149 | $5,593 |
| Iron, | 11,777 | 15,500 | 4,176 | $3,723 | ..... | ..... |
| Iron Foundry, | 40,400 | 38,900 | 34,000 | ..... | ..... | ..... |
| Boiler, Tube, Skelp Iron, Iron and Steel, | 129,089 | 108,201 | 77,495 | ..... | ..... | ..... |
| Iron and Steel, | 43,540 | 32,261 | 17,047 | ..... | ..... | ..... |
| Founders, Machinists and Car Builders, | 24,100 | 23,900 | 18,150 | ..... | ..... | ..... |
| Iron Works, | 386,000 | 397,660 | 353,759 | 11,660 | ..... | ..... |
| Boiler and Wrought Iron Works, | 29,460 | 30,300 | 29,035 | 840 | ..... | ..... |
| Plate and Tube Iron, | 84,710 | 71,125 | 31,088 | ..... | ..... | ..... |
| Welded Iron Chains, &c., | 34,000 | 24,000 | 20,000 | ..... | ..... | ..... |
| Rolling Mill, | 123,156 | 133,474 | 116,520 | 10,318 | ..... | ..... |
| Locomotives and Machinery, | 364,776 | 338,122 | 159,645 | ..... | ..... | ..... |
| Iron and Steel Plates, | 109,006 | 84,878 | 78,773 | ..... | ..... | ..... |
| Bessemer and Open Hearth Steel, | 1,934,387 | 1,729,430 | 1,440,767 | ..... | ..... | ..... |
| Horse and Mule Shoes, | 41,500 | 48,250 | 51,261 | 6,750 | 3,011 | 9,761 |
| Castings, | 35,298 | 33,745 | 25,660 | ..... | ..... | ..... |
| Zinc and Iron, | 161,272 | 155,891 | 140,600 | ..... | ..... | ..... |
| Iron and Brass Foundry, &c. | 85,500 | 62,000 | 43,500 | ..... | ..... | ..... |
| Iron Founders, | 49,500 | 18,000 | 5,200 | ..... | ..... | ..... |
| Total, | $56,005,869 | $47,928,943 | $36,645,157 | ..... | ..... | ..... |
| *Carpets.* | | | | | | |
| Carpets, | $65,000 | $48,750 | $40,000 | ..... | ..... | ..... |
| Carpets, | 84,570 | 73,190 | 65,632 | ..... | ..... | ..... |
| Carpets, | 43,567 | 28,899 | 35,084 | ..... | $6,185 | ..... |

*facturing in Pennsylvania.*

| WAGES. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. |
| $73,681 | $74,490 | $148,171 | ..... | ..... | ..... | 37⅝ | 61 | 07⅞ | $479 | $401 | $363 |
| 2,556 | ..... | ..... | ..... | 06¼ | 04 | 01⅞ | ..... | ..... | 490 | 469 | 456 |
| ..... | 11,324 | 7,601 | 31⅔ | ..... | ..... | ..... | 73 | 64½ | 512 | 517 | 522 |
| 1,500 | 4,900 | 6,400 | ..... | ..... | ..... | 03⅔ | 12⅔ | 15¾ | 673 | 648 | 618 |
| 20,888 | 30,706 | 51,594 | ..... | ..... | ..... | 16¼ | 29 | 40 | 546 | 487 | 435 |
| 11,279 | 15,214 | 26,493 | ..... | ..... | ..... | 25⅞ | 47¼ | 60¾ | 453 | 388 | 275 |
| 200 | 5,750 | 5,950 | ..... | ..... | ..... | ⅞ | 24 | 24⅔ | 401 | 398 | 386 |
| ..... | 43,901 | 32,241 | 03 | ..... | ..... | ..... | 11 | 08⅓ | 598 | 564 | 481 |
| ..... | 1,265 | 425 | 02⅞ | ..... | ..... | ..... | 04⅓ | 01½ | 438 | 505 | 492 |
| 16,585 | 40,037 | 56,662 | ..... | ..... | ..... | 18⅞ | 56⅓ | 64⅝ | 438 | 411 | 202 |
| 10,000 | 4,000 | 14,000 | ..... | ..... | ..... | 29½ | 16⅔ | 41⅛ | 358 | 320 | 307 |
| ..... | 16,954 | 6,636 | 08⅓ | ..... | ..... | ..... | 12¾ | 05⅓ | 464 | 419 | 391 |
| 26,654 | 178,437 | 205,091 | ..... | ..... | ..... | 07⅓ | 52⅔ | 56⅓ | 520 | 460 | 383 |
| 24,128 | 6,105 | 30,233 | ..... | ..... | ..... | 12⅞ | 07⅓ | 27¾ | 436 | 350 | 350 |
| 204,957 | 288,663 | 493,620 | ..... | ..... | ..... | 10⅝ | 16¾ | 25½ | 460 | 431 | 394 |
| ..... | ..... | ..... | 16¼ | 06¼ | 23½ | ..... | ..... | ..... | 377 | 371 | 366 |
| 1,553 | 8,085 | 9,638 | ..... | ..... | ..... | 04⅜ | 24 | 27⅓ | 441 | 421 | 342 |
| 5,381 | 15,291 | 20,672 | ..... | ..... | ..... | 03⅛ | 24 | 27⅓ | 420 | 405 | 390 |
| 22,500 | 18,500 | 42,000 | ..... | ..... | ..... | 27½ | 30 | 49⅛ | 388 | 413 | 458 |
| 31,500 | 12,800 | 44,300 | ..... | ..... | ..... | 63¾ | 71 | 89½ | 450 | 300 | 260 |
| $8,076,926 | $11,283,786 | $19,360,712 | ..... | ..... | ..... | 14⅜ | 23½ | 34⅝ | $541 | $516 | $459 |
| $16,250 | $8,750 | $25,000 | ..... | ..... | ..... | 25 | 17¾ | 39⅓ | $433 | $406 | $400 |
| 11,380 | 7,458 | 18,838 | ..... | ..... | ..... | 13⅓ | 10⅛ | 22¼ | 469 | 457 | 364 |
| 14,668 | ..... | 8,483 | ..... | 21⅓ | ..... | 33⅔ | ..... | 19¾ | 427 | 361 | 369 |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| Carpets, | $66,370 | $54,255 | $44,765 | ..... | ..... | ..... |
| Carpets, | 53,000 | 34,000 | 36,000 | ..... | $2,000 | ..... |
| Carpets, | 117,000 | 93,900 | 83,705 | ..... | ..... | ..... |
| Carpets, | 155,054 | 118,372 | 123,937 | ..... | 5,565 | ..... |
| Carpets, | 10,043 | 9,578 | 9,117 | ..... | ..... | ..... |
| Carpets, | 120,503 | 80,929 | 95,326 | ..... | 14,397 | ..... |
| Carpets, | 90,000 | 48,000 | 52,477 | ..... | 4,477 | ..... |
| Carpets, | 101,272 | 70,196 | 80,000 | ..... | 9,804 | ..... |
| Carpets, | 55,000 | 40,951 | 41,518 | ..... | 567 | ..... |
| Carpets, | 126,783 | 113,883 | 114,325 | ..... | 442 | ..... |
| Carpets,* | 258,648 | 174,225 | ..... | ..... | ..... | ..... |
| Carpets, | 64,927 | 47,888 | 46,032 | ..... | ..... | ..... |
| Carpets, | 122,872 | 102,183 | 89,930 | ..... | ..... | ..... |
| Carpets, | 26,211 | 24,500 | 18,388 | ..... | ..... | ..... |
| Carpets, | 19,858 | 13,992 | 10,198 | ..... | ..... | ..... |
| Carpets,* | 23,000 | 11,000 | ..... | ..... | ..... | ..... |
| Carpets, | 30,374 | 19,616 | 22,770 | ..... | 3,154 | ..... |
| Carpets, | 95,883 | 82,744 | 82,416 | ..... | ..... | ..... |
| Carpets, | 14,000 | 19,667 | 28,710 | $5,667 | 9,043 | $14,710 |
| Carpets, | 40,000 | 39,600 | 35,698 | ..... | ..... | ..... |
| Carpets, | 71,632 | 62,993 | 47,359 | ..... | ..... | ..... |
| Carpets, | 36,194 | 30,300 | 22,[illegible] | ..... | ..... | ..... |
| Carpets, | 27,353 | 33,849 | 29,742 | 6,496 | ..... | 2,389 |
| Total, | $1,919,115 | $1,487,871 | $1,[illegible]35,894 | ..... | ..... | ..... |
| *Hosiery.* | | | | | | |
| Hosiery,‖ | $92,000 | $82,000 | ..... | ..... | ..... | ..... |
| Hosiery, | 52,659 | 37,518 | $32,078 | ..... | ..... | ..... |
| Hosiery, | 33,600 | 30,000 | 45,600 | ..... | $15,600 | ..... |

*Out of business in 1894.
‖Plant not in operation in 1894.

*facturing in Pennsylvania.*

WAGES.

| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893 | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. |
| $12,115 | $9,490 | $21,115 | ..... | ..... | ..... | 18 | 17½ | 31¾ | $380 | $542 | $[illegible] |
| 19,000 | ..... | 17,[illegible] | ..... | 05¾ | ..... | 36 | ..... | 32 | 378 | 340 | 342 |
| 23,100 | 10,295 | 34,295 | ..... | ..... | ..... | 11¼ | 10¾ | 29¼ | 390 | 469 | 279 |
| 26,682 | ..... | 31,117 | ..... | 04½ | ..... | 23½ | ..... | 20 | 387 | 295 | 309 |
| 465 | 461 | 926 | ..... | ..... | ..... | 04¾ | 04¾ | 10 | 456 | 435 | 414 |
| 39,574 | ..... | 25,177 | ..... | 17¾ | ..... | 32¾ | ..... | 20¾ | 535 | 404 | 502 |
| 42,000 | ..... | 37,523 | ..... | 09 | ..... | 46⅔ | ..... | 41⅔ | 514 | 320 | 328 |
| 31,076 | ..... | 21,272 | ..... | 12½ | ..... | 30⅔ | ..... | 11 | 405 | 280 | 320 |
| 14,049 | ..... | 13,482 | ..... | 01⅓ | ..... | 25 | ..... | 24½ | 500 | 372 | 377 |
| 12,900 | ..... | 12,458 | ..... | 002 | ..... | 10¼ | ..... | 09 | 362 | 325 | 326 |
| 84,423 | 174,225 | 258,648 | ..... | ..... | ..... | 32 | ..... | ..... | 492 | 433 | ..... |
| 17,039 | 1,856 | 18,895 | ..... | ..... | ..... | 26 | 03½ | 29 | 433 | 319 | 307 |
| 20,689 | 12,253 | 32,942 | ..... | ..... | ..... | 17 | 12 | 26¾ | 469 | 440 | 401 |
| 1,711 | 6,112 | 7,823 | ..... | ..... | ..... | 06½ | 24¾ | 29 | 391 | 326 | 334 |
| 5,866 | 3,794 | 9,660 | ..... | ..... | ..... | 29½ | 27 | 69 | 231 | 349 | 294 |
| 12,000 | 11,000 | 23,000 | ..... | ..... | ..... | 52 | ..... | ..... | 469 | 440 | ..... |
| 10,758 | ..... | 7,604 | ..... | 17½ | ..... | 35½ | ..... | 25⅓ | 584 | 653 | 711 |
| 13,139 | 328 | 13,467 | ..... | ..... | ..... | 13⅝ | 004 | 14 | 545 | 350 | 396 |
| ..... | ..... | ..... | 40½ | 45¼ | 105 | ..... | ..... | ..... | 350 | 327 | 398 |
| 10,000 | 14,302 | 24,302 | ..... | ..... | ..... | 22¼ | 44⅓ | 60¾ | 150 | 175 | 104 |
| 18,639 | 5,104 | 23,743 | ..... | ..... | ..... | 26 | 09 | 33 | 504 | 441 | 420 |
| 5,894 | 7,765 | 13,659 | ..... | ..... | ..... | 16⅓ | 25⅔ | 43¼ | 329 | 275 | 313 |
| ..... | 4,107 | ..... | 24 | ..... | 08¾ | ..... | 12 | ..... | 218 | 193 | 170 |
| $461,244 | $221,977 | $683,221 | ..... | ..... | ..... | 24 | 15¼ | 35½ | $413 | $356 | $341 |
| $10,000 | $82,000 | $92,000 | ..... | ..... | ..... | 10¾ | ..... | ..... | $283 | $252 | ..... |
| 15,141 | 5,440 | 20,581 | ..... | ..... | ..... | 29 | 14½ | 37 | 202 | 187 | $144 |
| 9,000 | ..... | 6,600 | ..... | 52 | ..... | 23 | ..... | 36⅓ | 195 | 200 | 182 |

*Statistics Relating to Manu*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| Hosiery, | $14,400 | $70,000 | $12,480 | ..... | $2,480 | ..... |
| Hosiery, | 2,392 | 18,880 | 25,267 | ..... | 6,387 | $4,875 |
| Hosiery, | 14,000 | 9,500 | 8,930 | ..... | ..... | ..... |
| Hosiery, | 85,285 | 65,987 | 62,282 | ..... | ..... | ..... |
| Hosiery, | 110,200 | 114,000 | 111,000 | $3,800 | ..... | 800 |
| Hosiery, | 5,467 | 9,504 | 10,812 | 4,037 | 1,308 | 5,345 |
| Hosiery, | 28,000 | 8,000 | 24,883 | ..... | 16,883 | ..... |
| Total, | $461,403 | $385,387 | $333,332 | ..... | ..... | ..... |
| *Wool.* | | | | | | |
| Woolen Goods, | $92,015 | $75,887 | $89,881 | ..... | $13,994 | ..... |
| Woolen Goods, | 9,500 | 10,200 | 9,750 | $700 | ..... | $250 |
| Woolen Goods, | 25,500 | 23,400 | 27,247 | ..... | 3,847 | 1,747 |
| Woolen Goods, | 63,868 | 53,141 | 32,510 | ..... | ..... | ..... |
| Woolen Goods, | 150,000 | 40,000 | 100,000 | ..... | 60,000 | ..... |
| Woolen Goods, | 96,502 | 85,619 | 60,009 | ..... | ..... | ..... |
| Woolen Goods, | 92,000 | 46,000 | 31,390 | ..... | ..... | ..... |
| Woolen Cloth, | 25,000 | 17,000 | 18,000 | ..... | 1,000 | ..... |
| Woolen Goods, | 39,225 | 40,595 | 35,129 | 1,370 | ..... | ..... |
| Woolen Yarns, | 29,000 | 36,000 | 43,000 | 7,000 | 7,000 | 14,000 |
| Worsted Yarns, | 69,965 | 55,954 | 33,335 | ..... | ..... | ..... |
| Worsted Goods, | 28,000 | 11,000 | 15,400 | ..... | 4,400 | ..... |
| Woolen Yarns, | 35,312 | 26,417 | 32,810 | ..... | 6,393 | ..... |
| Woolen Yarns, | 32,369 | 22,487 | 15,127 | ..... | ..... | ..... |
| Woolen Goods, | 108,000 | 82,500 | 71,000 | ..... | ..... | ..... |
| Woolen Yarns, | 15,062 | 9,748 | 5,148 | ..... | ..... | ..... |
| Woolen Goods, | 61,555 | 50,132 | 48,228 | ..... | ..... | ..... |
| Woolen Yarns, | 30,000 | 24,000 | 20,000 | ..... | ..... | ..... |
| Woolen Yarns,* | 47,954 | 31,325 | ..... | ..... | ..... | ..... |
| Woolen Yarns, | 22,379 | 26,336 | 35,639 | 3,957 | 9,303 | 13,260 |

*Plant not in operation in 1894.

*facturing in Pennsylvania.*

| WAGES. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. |
| $14,400 | ..... | $1,920 | ..... | 19¾ | ..... | 30½ | ..... | 13⅓ | $288 | $333 | $208 |
| 1,512 | ..... | ..... | ..... | 34 | 20 | 07⅔ | ..... | ..... | 296 | 286 | 281 |
| 4,500 | $570 | 5,070 | ..... | ..... | ..... | 32⅛ | 05⅔ | 43⅓ | 490 | 316 | 331 |
| 19,928 | 3,705 | 23,003 | ..... | ..... | ..... | 22⅝ | 05⅔ | 28 | 284 | 275 | 249 |
| ..... | 3,000 | ..... | 03½ | ..... | .00¾ | ..... | 02¾ | ..... | 333 | 335 | 299 |
| ..... | ..... | ..... | 73¾ | 12 | 99 | ..... | ..... | ..... | 130 | 117 | 93 |
| 20,000 | ..... | 3,117 | ..... | ..... | ..... | 71⅔ | 68¾.. | 11 | 160 | 106 | 199 |
| $76,016 | $52,055 | $128,071 | ..... | ..... | ..... | ..... | ..... | ..... | $258⅓ | $249⅔ | $220⅓ |
| $16 128 | ..... | $2,134 | ..... | 18⅛ | ..... | 17½ | ..... | 02⅓ | $313 | $238 | $303 |
| ..... ..... | $150 | ..... | 07¼ | ..... | 02⅔ | ..... | 04⅓ | ..... | 237 | 268 | 256 |
| 2,100 | ..... | ..... | ..... | 16⅓ | 06¾ | 08½ | ..... | ..... | 346 | 341 | 389 |
| 10,727 | 20,631 | 31,358 | ..... | ..... | ..... | 16½ | 38¼ | 49 | 391 | 354 | 234 |
| 110,000 | ..... | 50,000 | ..... | 150 | ..... | 73⅓ | ..... | 33⅓ | 214 | 200 | 208 |
| 10,883 | 25,619 | 36,502 | ..... | ..... | ..... | 11⅓ | 29 | 37¾ | 351 | 346 | 263 |
| 46,000 | 14,610 | 60,610 | ..... | ..... | ..... | .50 | 31⅞ | 66 | 354 | 177 | 299 |
| 8 000 | ..... | 7,000 | ..... | 05⅞ | ..... | 32 | ..... | 28 | 250 | 170 | 180 |
| ..... ..... | 5,466 | 3,096 | 03½ | ..... | ..... | ..... | 13½ | 08 | 413 | 232 | 234 |
| ..... | ..... | ..... | 24⅛ | ..... | ..... | ..... | ..... | ..... | 508 | 225 | 251 |
| 14,011 | 22,619 | 36,630 | ..... | ..... | ..... | 20 | 40½ | 52⅓ | 551 | 518 | 287 |
| 17,000 | ..... | 12,600 | ..... | 40 | ..... | 60⅝ | ..... | 45 | 266 | 177 | 191 |
| 8,895 | ..... | 2,502 | ..... | 24¼ | ..... | 25¼ | ..... | 07¾ | 353 | 264 | 328 |
| 9 882 | 7,360 | 17,242 | ..... | ..... | ..... | 30½ | 32¾ | 53¼ | 359 | 374 | 360 |
| 25,500 | 11,500 | 37,000 | ..... | ..... | ..... | 23¾ | 13⅞ | 34¼ | 432 | 330 | 284 |
| 5,314 | 4,600 | 9,914 | ..... | ..... | ..... | 35⅓ | 47 | 65⅔ | 274 | 195 | 257 |
| 11,423 | 1,904 | 13,307 | ..... | ..... | ..... | 18½ | 03¾ | 21½ | 305 | 286 | 322 |
| 6,000 | 4,000 | 10,000 | ..... | ..... | ..... | 20 | 16⅔ | 33⅓ | 333 | 342 | 333 |
| 16,629 | 31,325 | 47,954 | ..... | ..... | ..... | 34⅔ | ..... | ..... | 319 | 208 | ..... |
| ..... | ..... | ..... | 17⅞ | 35⅓ | 59 | ..... | ..... | ..... | 534 | 192 | 289 |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| Woolen Yarns,* | $50,000 | $20,000 | ..... | ..... | ..... | ..... |
| Worsted Yarns, | 105,000 | 53,000 | $52,500 | ..... | ..... | ..... |
| Worsted and Woolen Goods, | 111,858 | 94,561 | 78,344 | ..... | ..... | ..... |
| Woolen Goods, | 324,170 | 253,297 | 199,284 | ..... | ..... | ..... |
| Woolen Goods, | 30,000 | 19,000 | 20,000 | ..... | $1,000 | ..... |
| Woolen Yarns, | 34,997 | 30,088 | 24,070 | ..... | ..... | ..... |
| Woolen and Worsted Goods, | 122,947 | 118,196 | 99,121 | ..... | ..... | ..... |
| Total, | $1,852,178 | $1,355,893 | $1,196,913 | ..... | ..... | ..... |
| *Cotton.* | | | | | | |
| Cotton Goods, | $50,775 | $48,972 | $40,189 | ..... | ..... | ..... |
| Cotton Goods, | 39,284 | 25,977 | 20,476 | ..... | ..... | ..... |
| Cotton Goods,\|\| | 18,000 | 4,000 | ..... | ..... | ..... | ..... |
| Cotton Goods, | 42,380 | 18,065 | 21,000 | ..... | $2,935 | ..... |
| Cotton Goods, | 86,767 | 108,200 | 70,600 | $21,433 | ..... | ..... |
| Cotton Goods, | 46,108 | 19,000 | 25,000 | ..... | 6,000 | ..... |
| Cotton Damask, | 60,000 | 12,500 | 22,500 | ..... | 10,000 | ..... |
| Cotton Yarns, | 33,564 | 35,997 | 38,000 | 2,433 | 2,003 | $4,436 |
| Cotton Weaving, | 80,043 | 69,065 | 63,086 | ..... | ..... | ..... |
| Cotton Goods, | 260,000 | 130,000 | 90,000 | ..... | ..... | ..... |
| Cotton Yarns, | 25,500 | 23,000 | 21,120 | ..... | ..... | ..... |
| Cotton Yarns, | 8,900 | 7,400 | 5,800 | ..... | ..... | ..... |
| Cotton Yarns, | 20,000 | 1,500 | 10,000 | ..... | 8,500 | ..... |
| Cotton Goods, | 30,000 | 25,000 | 28,000 | ..... | 3,000 | ..... |
| Cotton Goods, | 83,000 | 81,000 | 70,000 | ..... | ..... | ..... |
| Cotton Yarns, | 30,730 | 18,826 | 20,270 | ..... | 1,444 | ..... |
| Cotton Goods, | 104,634 | 78,588 | 65,831 | ..... | ..... | ..... |
| Cotton Goods, | 26,000 | 25,000 | 13,000 | ..... | ..... | ..... |
| Cotton Goods, | 50,000 | 25,000 | 35,000 | ..... | 10,000 | ..... |

*Plant not in operation in 1894.
||Out of business in 1894.

*facturing in Pennsylvania.*

| WAGES. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. |
| $30,000 | $20,000 | $50,000 | ..... | ..... | ..... | 60 | ..... | ..... | $333 | $400 | ..... |
| 52,000 | 500 | 52,500 | ..... | ..... | ..... | 49½ | 009 | 50 | 221 | 230 | ..... |
| 17,297 | 16,217 | 33,514 | ..... | ..... | ..... | 15½ | 17¼ | 29¾ | 437 | 422 | $444 |
| 70,873 | 64,013 | 134,886 | ..... | ..... | ..... | 21⅞ | 25¼ | 41½ | 430 | 372 | 323 |
| 11,000 | ..... | 10,000 | ..... | 05¼ | ..... | 36⅔ | ..... | 33⅓ | 545 | 292 | 308 |
| 4,909 | 6,018 | 10,927 | ..... | ..... | ..... | 13⅞ | 20 | 31¼ | 448 | 501 | 481 |
| 4,751 | 19,075 | 23,826 | ..... | ..... | ..... | 03¾ | 16⅛ | 19½ | 410 | 315 | 305 |
| $496,285 | $158,980 | $655,265 | ..... | ..... | ..... | 26⅔ | 11¾ | 35⅔ | $344 | $299 | $299 |
| $1,803 | $8,783 | $10,586 | ..... | ..... | ..... | 03½ | 17¾ | 20¾ | $228 | $224 | $193 |
| 13,307 | 5,501 | 18,808 | ..... | ..... | ..... | 33⅞ | 21¼ | 47¾ | 479 | 351 | 365 |
| 14,000 | 4,000 | 18,000 | ..... | ..... | ..... | 77¾ | ..... | ..... | 450 | 200 | ..... |
| 24,315 | ..... | 21,380 | ..... | 16¼ | ..... | 57⅓ | ..... | 50½ | 504 | 215 | 250 |
| ..... | 37,600 | 16,167 | 24⅝ | ..... | ..... | ..... | 34¾ | 18⅝ | 320 | 343 | 337 |
| 27,108 | ..... | 21,108 | ..... | 31⅔ | ..... | 58¾ | ..... | 45⅓ | 375 | 292 | 416 |
| 47,500 | ..... | 37,500 | ..... | 80 | ..... | 79 | ..... | 62½ | 384 | 320 | 292 |
| ..... | ..... | ..... | 07¼ | 05⅔ | 13¼ | ..... | ..... | ..... | 373 | 342 | 292 |
| 10,978 | 5,979 | 16,957 | ..... | ..... | ..... | 13⅔ | 08¾ | 21¼ | 439 | 379 | 346 |
| 130,000 | 40,000 | 170,000 | ..... | ..... | ..... | 50 | 30¾ | 65⅓ | 520 | 260 | 383 |
| 2,500 | 1,880 | 4,380 | ..... | ..... | ..... | 10⅝ | 08¼ | 17¼ | 464 | 418 | 384 |
| 1,500 | 1,600 | 3,100 | ..... | ..... | ..... | 16⅞ | 21⅔ | 35 | 371 | 308 | 215 |
| 18,500 | ..... | 10,000 | ..... | 566 | ..... | 92½ | ..... | 50 | 200 | 15 | 100 |
| 5,000 | ..... | 2,000 | ..... | 12 | ..... | 16⅔ | ..... | 06⅔ | 300 | 250 | 280 |
| 2,000 | 11,000 | 13,000 | ..... | ..... | ..... | 01¾ | 13½ | 15¾ | 359 | 362 | 325 |
| 11,904 | ..... | 10,460 | ..... | 08 | ..... | 38⅔ | ..... | 34⅔ | 279 | 231 | 239 |
| 26,046 | 12,757 | 38,803 | ..... | ..... | ..... | 24⅞ | 16¼ | 37 | 271 | 251 | 188 |
| 1,000 | 12,000 | 13,000 | ..... | ..... | ..... | 03⅔ | 48 | 50 | 400 | 416 | 260 |
| 25,000 | ..... | 15,000 | ..... | 40 | ..... | 50 | ..... | 30 | 333 | 166 | 233 |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| Cotton Goods,* | $14,501 | $11,826 | ..... | ..... | ..... | ..... |
| Cotton Goods, | 264,000 | 426,000 | $157,235 | ..... | ..... | ..... |
| Total, | $1,374,186 | $1,014,916 | $817,107 | ..... | ..... | ..... |
| *Glass.* | | | | | | |
| Glass-ware,\|\| | $124,114 | $38,817 | ..... | ..... | ..... | ..... |
| Glass-ware, | 158,901 | 131,459 | $124,709 | ..... | ..... | ..... |
| Glass-ware, | 54,651 | 43,589 | 37,239 | ..... | ..... | ..... |
| Glass-ware,\|\| | 85,539 | 49,087 | ..... | ..... | ..... | ..... |
| Glass-ware, | 126,583 | 110,160 | 114,412 | ..... | $4,252 | ..... |
| Glass-ware,\|\| | 57,959 | 25,189 | ..... | ..... | ..... | ..... |
| Glass-ware, | 96,378 | 79,719 | 40,298 | ..... | ..... | ..... |
| Glass-ware, | 84,458 | 64,755 | 59,401 | ..... | ..... | ..... |
| Glass-ware, | 48,993 | 35,814 | 65,503 | ..... | 29,689 | $16,510 |
| Glass-ware, | 175,000 | 146,000 | 195,000 | ..... | 49,000 | 20,000 |
| Plate Glass, | 308,071 | 144,625 | 178,916 | ..... | 34,291 | ..... |
| Window Glass, | 108,415 | 110,550 | 129,216 | $2,135 | 18,666 | 20,801 |
| Glass-ware, | 119,368 | 80,923 | 77,460 | ..... | ..... | ..... |
| Bottles, | 13,885 | 31,165 | 7,662 | 17,280 | ..... | ..... |
| Glass, | 153,243 | 138,487 | 146,518 | ..... | 8,031 | ..... |
| Glass, | 259,052 | 178,984 | 178,984 | ..... | ..... | ..... |
| Glass bottles, | 108,564 | 105,111 | 71,304 | ..... | ..... | ..... |
| Window Glass, | 95,445 | 62,559 | 41,186 | ..... | ..... | ..... |
| Glass-ware, | 48,000 | 55,000 | 52,000 | 7,000 | ..... | 4,000 |
| Plate Glass, | 1,054,102 | 690,469 | 699,319 | ..... | 8,850 | ..... |
| Total, | $3,280,721 | $2,322,460 | $2,219,127 | ..... | ..... | ..... |

*Out of business in 1894.
||Plant not in operation in 1894.

*facturing in Pennsylvania.*

| WAGES. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893 | 1894 from 1892. | 1892. | 1893. | 1894 |
| $2,675 | $11,826 | $14,501 | ..... | ..... | ..... | 18½ | ..... | ..... | $284 | $281 | ..... |
| 18,000 | 88,765 | 106,765 | ..... | ..... | ..... | 07⅛ | 36 | 40½ | 332 | 333 | $218 |
| $259,270 | $197,809 | $557,078 | ..... | ..... | ..... | 26⅛ | 19⅜ | 40½ | $359 | $291 | $264 |
| $95,297 | $38,817 | $124,114 | ..... | ..... | ..... | 68⅔ | ..... | ..... | $329 | $164 | ..... |
| 27,442 | 6,750 | 34,192 | ..... | ..... | ..... | 17¼ | 05 | 21½ | 503 | 502 | $432 |
| 11,062 | 6,350 | 17,412 | ..... | ..... | ..... | 20¼ | 14½ | 40 | 399 | 390 | 351 |
| 26,087 | 49,087 | 85,539 | ..... | ..... | ..... | 42⅝ | ..... | ..... | 405 | 249 | ..... |
| 16,423 | ..... | 12,171 | ..... | 03⅔ | ..... | 13 | ..... | 09 | 361 | 358 | 370 |
| 22,770 | 25,189 | 57,959 | ..... | ..... | ..... | 51⅞ | ..... | ..... | 389 | 197 | ..... |
| 16,659 | 39,421 | 56,080 | ..... | ..... | ..... | 17⅔ | 49 | 58 | 461 | 324 | 310 |
| 19,703 | 5,354 | 25,057 | ..... | ..... | ..... | 23½ | 08¼ | 29 | 444 | 472 | 464 |
| 13,179 | ..... | ..... | ..... | 45⅓ | 25 | 26¾ | ..... | ..... | 347 | 249 | 377 |
| 29,000 | ..... | ..... | ..... | 28 | 11½ | 16⅔ | ..... | ..... | 350 | 280 | 325 |
| 162,446 | ..... | 129,155 | ..... | 19 | 41⅔ | 53 | ..... | ..... | 560 | 362 | 447 |
| ..... | ..... | ..... | 01¾ | 14½ | 16 | ..... | ..... | ..... | 553 | 542 | 633 |
| 28,445 | 3,463 | 41,908 | ..... | ..... | ..... | 32¼ | 04¼ | 35 | 394 | 250 | 403 |
| ..... | 23,503 | 6,223 | 12½ | ..... | ..... | ..... | ..... | ..... | 165 | 346 | 102 |
| 14,756 | ..... | 6,725 | ..... | 05½ | ..... | 09½ | ..... | 04⅓ | 561 | 507 | 538 |
| 80,068 | ..... | 80,068 | ..... | ..... | ..... | .31 | ..... | .31 | 575 | 596 | 596 |
| 3,453 | 33,807 | 37,260 | ..... | ..... | ..... | .03¼ | 32 | 34 | 527 | 536 | 407 |
| 32,886 | 21,373 | 54,259 | ..... | ..... | ..... | 34½ | ..... | ..... | 954 | 625 | 381 |
| ..... | 3,000 | ..... | 14½ | ..... | 08⅓ | ..... | 05½ | ..... | 220 | 239 | 248 |
| 363,633 | ..... | 354,883 | ..... | 01¼ | ..... | 34½ | ..... | 33 | 466 | 325 | 473 |
| $958,261 | $103,333 | $1,061,594 | ..... | ..... | ..... | 29⅛ | 04⅓ | 32⅓ | $453 | $337 | $431 |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| *Fabrics.* | | | | | | |
| Hosiery and Underwear, | $211,000 | $189,000 | $150,000 | ..... | ..... | ..... |
| Silk and Wool and Cotton and Wool, | 47,683 | 40,424 | 22,408 | ..... | ..... | ..... |
| Chenille, Upholstery and Drapery, | 207,570 | 177,706 | 178,833 | ..... | $1,127 | ..... |
| Quilts, Lap Robes, &c., | 58,000 | 49,000 | 31,000 | ..... | ..... | ..... |
| Underwear, | 66,000 | 76,500 | 52,000 | $10,500 | ..... | ..... |
| Tapes, Webs and Narrow Fabrics, | 55,000 | 35,000 | 40,000 | ..... | 5,000 | ..... |
| Turkish Towels, Rugs, &c., | 46,996 | 42,116 | 46,006 | ..... | 3,890 | ..... |
| Lace, | 99,511 | 81,776 | 103,912 | ..... | 22,136 | ..... |
| Chenille Curtains, &c., | 237,724 | 90,430 | 104,059 | ..... | 13,629 | ..... |
| Rugs, Lace Curtains, &c., | 769,192 | 740,405 | 549,472 | ..... | ..... | ..... |
| Worsted and Spun Silk Yarns, | 123,216 | 102,880 | 115,750 | ..... | 12,870 | ..... |
| Chenille Curtains, Rugs, &c., | 131,020 | 108,633 | 96,340 | ..... | ..... | ..... |
| Plush, | 61,078 | 60,992 | 33,770 | ..... | ..... | ..... |
| Cotton and Woolen Goods, | 15,073 | 12,601 | 14,210 | ..... | 1,609 | ..... |
| Turkish Towels, &c., | 47,000 | 36,000 | 50,000 | ..... | 14,000 | $3,000 |
| Worsted and Woolen Goods, | 263,346 | 233,788 | 223,492 | ..... | ..... | ..... |
| Cotton and Woolen Yarns, | 26,388 | 25,309 | 21,996 | ..... | ..... | ..... |
| Hosiery and Hosiery Yarns, | 71,613 | 55,572 | 66,650 | ..... | 11,078 | ..... |
| Textile, | 17,925 | 14,051 | 31,000 | ..... | 16,949 | 13,075 |
| Tickings and Stripes, | 66,141 | 45,746 | 52,910 | ..... | 7,164 | ..... |
| Knitting Mills, | 82,498 | 101,759 | 99,915 | 19,261 | ..... | 17,417 |
| Plush, Table Covers, &c., | 44,967 | 29,834 | 31,082 | ..... | 1,248 | ..... |
| Hosiery, &c., | 26,876 | 30,831 | 21,429 | 3,955 | ..... | ..... |
| Wood-working Machinery, | 41,520 | 32,138 | 28,816 | ..... | ..... | ..... |
| Textile, | 13,940 | 11,592 | 7,904 | ..... | ..... | ..... |
| Wood-working Machinery, | 73,184 | 62,103 | 62,272 | ..... | 169 | ..... |
| Cotton and Woolen Yarns, | 14,644 | 11,212 | 7,958 | ..... | ..... | ..... |
| Cotton Goods, | 20,000 | 10,000 | 10,000 | ..... | ..... | ..... |

*facturing in Pennsylvania.*

| WAGES. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. |
| $22 000 | $39,000 | $61,000 | ..... | ..... | ..... | 10½ | 20⅔ | 28⅞ | $290 | $260 | $207 |
| 7,259 | 18,016 | 25,275 | ..... | ..... | ..... | 15¼ | 44⅔ | 53 | 366 | 310 | 320 |
| 29,864 | ..... | 28,737 | ..... | 006 | ..... | 14⅓ | ..... | 13⅓ | 500 | 489 | 534 |
| 9,000 | 18,000 | 27,000 | ..... | ..... | ..... | 15½ | 36¾ | 46⅔ | 351 | 408 | 326 |
| ..... | 24,500 | 14,000 | 16 | ..... | ..... | ..... | 32 | 21¼ | 185 | 196 | 187 |
| 20,000 | ..... | 15,000 | ..... | 14¼ | ..... | 36⅓ | ..... | 27¼ | 344 | 292 | 286 |
| 4,880 | ..... | 990 | ..... | 09¼ | ..... | 10⅓ | ..... | 02⅛ | 293 | 300 | 307 |
| 17,735 | ..... | 4,401 | ..... | 27 | ..... | 18 | ..... | 04½ | 306 | 272 | 230 |
| 147,294 | ..... | 133,665 | ..... | 15 | ..... | 62⅓ | ..... | 56⅓ | 452 | 476 | 520 |
| 28,787 | 190,923 | 219,710 | ..... | ..... | ..... | 03¾ | 25¾ | 28⅔ | 364 | 411 | 398 |
| 20,336 | ..... | 7,466 | ..... | 12½ | ..... | 16½ | ..... | 60⅔ | 308 | 278 | 289 |
| 22,387 | 12,293 | 44,680 | ..... | ..... | ..... | 17 | 11⅓ | 34⅛ | 282 | 256 | 244 |
| 81 | 27,216 | 27,397 | ..... | ..... | ..... | 001⅛ | 44⅔ | 44⅔ | 244 | 305 | 281 |
| 2,472 | ..... | 863 | ..... | 12¾ | ..... | 16⅓ | ..... | 05⅔ | 296 | 257 | 263 |
| 11,000 | ..... | ..... | ..... | 39 | 06¼ | 23⅓ | ..... | ..... | 391 | 327 | 333 |
| 29,558 | 10,296 | 39,854 | ..... | ..... | ..... | 11¼ | 04⅜ | 15⅛ | 439 | 441 | 447 |
| 1,079 | 3,313 | 4,392 | ..... | ..... | ..... | 04 | 13 | 16⅔ | 432 | 436 | 468 |
| 16,041 | ..... | 4,963 | ..... | 20 | ..... | 22⅜ | ..... | 06⅞ | 243 | 247 | 289 |
| 3,874 | ..... | ..... | ..... | 12 | 07⅞ | 21⅜ | ..... | ..... | 417 | 334 | 443 |
| 20,395 | ..... | 13,231 | ..... | 15¾ | ..... | 30¾ | ..... | 20 | 426 | 305 | 259 |
| ..... | 1,844 | ..... | 23⅓ | ..... | 21⅛ | ..... | 01¾ | ..... | 317 | 345 | 344 |
| 15,133 | ..... | 13,885 | ..... | 04¼ | ..... | 33⅔ | ..... | 31 | 449 | 373 | 388 |
| ..... | 9,402 | 5,447 | 14⅔ | ..... | ..... | ..... | 30½ | 30⅓ | 199 | 205 | 179 |
| 9,382 | 3,322 | 12,704 | ..... | ..... | ..... | 22½ | 10⅓ | 30⅔ | 461 | 373 | 389 |
| 2,348 | 3,688 | 6,036 | ..... | ..... | ..... | 17 | 31⅞ | 43⅓ | 422 | 351 | 239 |
| 11,081 | ..... | 10,912 | ..... | 002⅔ | ..... | 15⅛ | ..... | 15 | 475 | 437 | 449 |
| 3,432 | 3,254 | 6,686 | ..... | ..... | ..... | 23½ | 29 | 45⅔ | 293 | 311 | 306 |
| 10,000 | ..... | 10,000 | ..... | ..... | ..... | 50 | ..... | 50 | 416 | 416 | 417 |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| Cotton and Woolen Goods, ..... | $43,500 | $30,000 | $27,000 | ..... | ..... | ..... |
| Cotton Carpet Yarn, ..... | 20,277 | 16,561 | 12,713 | ..... | ..... | ..... |
| Dress and Cloak Trimmings, .. | 155,000 | 75,000 | 60,000 | ..... | ..... | ..... |
| Cotton and Woolen Goods, ..... | 22,100 | 18,936 | 19,940 | ..... | $1,104 | ..... |
| Rubber Boots and Shoes, ..... | 141,784 | 145,472 | 128,157 | $3,688 | ..... | ..... |
| Carpet Yarns, ..... | 18,500 | 12,000 | 15,000 | ..... | 3,000 | ..... |
| Carpet Yarns, ..... | 25,000 | 15,000 | 15,000 | ..... | ..... | ..... |
| Cotton and Woolen Goods, ..... | 115,477 | 91,240 | 77,175 | ..... | ..... | ..... |
| Cotton and Woolen Cloths, ... | 40,608 | 30,360 | 27,553 | ..... | ..... | ..... |
| Cotton and Woolen Goods, .... | 45,000 | 32,000 | 31,500 | ..... | ..... | ..... |
| Cottonades, ..... | 39,100 | 31,172 | 34,900 | ..... | 3,728 | ..... |
| Carpets and Upholstery Fabrics, ..... | 50,000 | 40,000 | 35,000 | ..... | ..... | ..... |
| Woolen and Worsted Yarns, ... | 300,000 | 232,200 | 95,000 | ..... | ..... | ..... |
| Cotton and Woolen Goods, ..... | 36,152 | 28,250 | 29,330 | ..... | 1,080 | ..... |
| Cotton and Woolen Cloth, ..... | 38,392 | 35,457 | 30,000 | ..... | ..... | ..... |
| Cotton and Woolen Yarn, ..... | 17,928 | 12,102 | 10,219 | ..... | ..... | ..... |
| Knit Goods, ..... .. | 75,000 | 50,000 | 55,000 | ..... | 5,000 | ..... |
| Cotton, Woolen and Merino Yarns, ..... | 19,000 | 11,500 | 9,900 | ..... | ..... | ..... |
| Hosiery and Knit Goods, ..... | 48,000 | 40,000 | 45,000 | ..... | 5,000 | ..... |
| Woolen and Merino Yarns, .... | 10,818 | 9,469 | 5,544 | ..... | ..... | ..... |
| Worsted Goods, ..... | 100,000 | 30,000 | 65,000 | ..... | 35,000 | ..... |
| Underwear, ..... | 45,495 | 41,081 | 35,850 | ..... | ..... | ..... |
| Cheviots, &c., ..... | 19,555 | 12,017 | 11,984 | ..... | ..... | ..... |
| Cotton and Worsted Goods, .... | 65,392 | 61,081 | 54,942 | ..... | ..... | ..... |
| Table Covers, &c., ..... | 31,728 | 24,600 | 29,640 | ..... | 5,040 | ..... |
| Cotton, Merino and Worsted Goods, ..... | 30,632 | 23,797 | 28,269 | ..... | 4,472 | ..... |
| Carpet and Rug Yarn, ..... | 54,756 | 37,589 | 31,541 | ..... | ..... | ..... |
| Cotton and Woolen Goods,* ... | 50,000 | 41,500 | ..... | ..... | ..... | ..... |

*Plant not in operation in 1894.

*facturing in Pennsylvania.*

| WAGES. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. |
| $13,500 | $3,000 | $16,500 | ..... | ..... | ..... | 31⅓ | 10 | 38 | $290 | $250 | $225 |
| 2,716 | 3,848 | 7,564 | ..... | ..... | ..... | 18⅓ | 23¼ | 37⅓ | 346 | 352 | 231 |
| 80,000 | 15,000 | 95,000 | ..... | ..... | ..... | 51⅔ | 20 | 61¼ | 443 | 375 | 300 |
| 3,164 | ..... | 2,160 | ..... | 05⅓ | ..... | 14⅓ | ..... | 09¾ | 492 | 473 | 499 |
| ..... | 17,315 | 13,627 | 02⅔ | ..... | ..... | ..... | 11⅞ | 09⅔ | 435 | 415 | 366 |
| 6,500 | ..... | 3,500 | ..... | 25 | ..... | 35 | ..... | 19 | 440 | 316 | 394 |
| 10,000 | ..... | 10,000 | ..... | ..... | ..... | 40 | ..... | 04 | 312 | 200 | 200 |
| 24,237 | 14,065 | 38,065 | ..... | ..... | ..... | 21 | 15⅓ | 33 | 413 | 328 | 279 |
| 10,248 | 2,807 | 13,055 | ..... | ..... | ..... | 25¼ | 09¼ | 32⅛ | 307 | 300 | 241 |
| 13,000 | 500 | 13,500 | ..... | ..... | ..... | 28⅞ | 01½ | 30 | 321 | 291 | 217 |
| 7,928 | ..... | 4,200 | ..... | 11⅞ | ..... | 20¼ | ..... | 10⅔ | 270 | 230 | 229 |
| | | | | | | | | | | | |
| 10,000 | 5,000 | 15,000 | ..... | ..... | ..... | 20 | 12½ | 30 | 357 | 333 | 260 |
| 67,800 | 137,200 | 205,000 | ..... | ..... | ..... | 22½ | 59⅛ | 66⅔ | 250 | 309 | 186 |
| 7,902 | ..... | 6,822 | ..... | 03⅞ | ..... | 21⅔ | ..... | 18⅞ | 301 | 314 | 296 |
| 2,935 | 5,457 | 8,457 | ..... | ..... | ..... | 07⅔ | 15⅓ | 22 | 417 | 385 | 319 |
| 5,826 | 1,883 | 7,709 | ..... | ..... | ..... | 32½ | 15½ | 43 | 329 | 281 | 243 |
| 25,000 | ..... | 20,000 | ..... | 10 | ..... | 33⅓ | ..... | 26⅔ | 375 | 333 | 275 |
| | | | | | | | | | | | |
| 7,500 | 1,600 | 9,100 | ..... | ..... | ..... | 39½ | 13⅞ | 48 | 316 | 191 | 330 |
| 8,000 | ..... | 3,000 | ..... | 12½ | ..... | 16⅔ | ..... | 06¼ | 274 | 266 | 300 |
| 1,349 | 3,925 | 5,274 | ..... | ..... | ..... | 12½ | 41½ | 48¾ | 309 | 231 | 231 |
| 70,000 | ..... | 35,000 | ..... | 11⅔ | ..... | 70 | ..... | 35 | 333 | 300 | 325 |
| 4,414 | 5,231 | 9,645 | ..... | ..... | ..... | 09¾ | 12¾ | 21¼ | 337 | 304 | 160 |
| 7,538 | 33 | 7,571 | ..... | ..... | ..... | 38½ | 003 | 38¾ | 488 | 400 | 387 |
| 4,311 | 6,139 | 10,450 | ..... | ..... | ..... | 06½ | 10½ | 16 | 373 | 436 | 410 |
| 7,128 | ..... | 2,088 | ..... | 20½ | ..... | 22½ | ..... | 06½ | 412 | 409 | 401 |
| | | | | | | | | | | | |
| 6,835 | ..... | 2,363 | ..... | 18¾ | ..... | 22⅓ | ..... | 07⅔ | 235 | 237 | 282 |
| 17,167 | 6,048 | 23,215 | ..... | ..... | ..... | 31⅓ | 16 | 42½ | 438 | 395 | 395 |
| 8,500 | 41,500 | 50,000 | ..... | ..... | ..... | 17 | ..... | ..... | 400 | 345 | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| Chenille Goods, | $41,179 | $26,992 | $25,711 | ..... | ..... | ..... |
| Knit Underwear, | 53,553 | 33,449 | 20,540 | ..... | ..... | ..... |
| Knit Goods, | 46,601 | 54,409 | 42,342 | $7,808 | ..... | ..... |
| Hosiery and Underwear, | 66,815 | 45,101 | 46,892 | ..... | $1,791 | ..... |
| Dress Trimmings, | 52,767 | 21,344 | 25,700 | ..... | 4,356 | ..... |
| Chenille Curtains, | 31,000 | 32,000 | 37,885 | 1,000 | 5,885 | $6,885 |
| Wool Shoddies,* | 13,780 | 12,837 | ..... | ..... | ..... | ..... |
| Carpet and Carpet Yarn, | 224,485 | 114,817 | 180,000 | ..... | 65,183 | ..... |
| Table Covers and Mohair Plushes, | 50,280 | 30,757 | 11,968 | ..... | ..... | ..... |
| Yarns, | 9,488 | 7,474 | 4,299 | ..... | ..... | ..... |
| Cotton, Woolen and Mixed Goods, | 30,000 | 24,200 | 26,000 | ..... | 1,800 | ..... |
| Cotton and Woolen Goods, | 36,763 | 36,354 | 10,500 | ..... | ..... | ..... |
| Silk Throwing and Silk Weaving, | 48,481 | 53,162 | 57,008 | 4,681 | 3,846 | 8,527 |
| Textile Fabrics, | 102,206 | 87,453 | 78,672 | ..... | ..... | ..... |
| Hosiery Yarn, | 13,964 | 11,990 | 12,254 | ..... | 264 | ..... |
| Organs and Pianos, | 28,913 | 25,587 | 22,841 | ..... | ..... | ..... |
| Blankets, Yarns, &c., | 525,000 | 457,000 | 400,462 | ..... | ..... | ..... |
| Cabinet Organs, | 25,060 | 24,997 | 23,346 | ..... | ..... | ..... |
| Caramels, | 95,000 | 80,000 | 81,000 | ..... | 1,000 | ..... |
| Silk Throwing (on commission), | 40,000 | 25,000 | 24,903 | ..... | ..... | ..... |
| Broad and Thrown Silks, | 280,800 | 98,550 | 240,000 | ..... | 141,450 | ..... |
| Electric Light Carbons, | 25,000 | 27,000 | 29,000 | 2,000 | 2,000 | 4,000 |
| Sewing Machines, &c., | 84,657 | 48,096 | 38,247 | ..... | ..... | ..... |
| Silk Throwing, | 9,717 | 8,693 | 7,935 | ..... | ..... | ..... |
| Ribbons, | 40,661 | 30,647 | 35,500 | ..... | 4,853 | ..... |
| Silk Throwing, | 22,770 | 27,000 | 31,855 | 4,230 | 4,855 | 9,085 |
| Silk Spinning and Weaving, | 85,502 | 75,598 | 100,137 | ..... | 24,539 | 14,635 |
| Parlor Matches, | 27,617 | 23,583 | 19,718 | ..... | ..... | ..... |

*Plant not operated in 1894.

*facturing in Pennsylvania.*

WAGES.

| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892 | 1893. | 1894. |
| $14,187 | $1,281 | $15,468 | ..... | ..... | ..... | 36¾ | 04⅞ | 37½ | $424 | $350 | $271 |
| 20,104 | 12,909 | 33,013 | ..... | ..... | ..... | 37½ | 38⅔ | 61⅔ | 352 | 341 | 321 |
| ..... | 12,067 | 4,259 | 16¾ | ..... | ..... | ..... | 22⅛ | 09⅛ | 221 | 274 | 282 |
| 21,714 | ..... | 19,923 | ..... | 04 | ..... | 32⅓ | ..... | 29⅞ | 411 | 273 | 293 |
| 31,423 | ..... | 27,067 | ..... | 20⅜ | ..... | 59 | ..... | 51⅓ | 219 | 180 | 257 |
| ..... | ..... | ..... | 03¼ | 18⅓ | 22¼ | ..... | ..... | ..... | 413 | 320 | 252 |
| 943 | 12,837 | 13,780 | ..... | ..... | ..... | 06½ | ..... | ..... | 383 | 356 | ..... |
| 109,668 | ..... | 44,485 | ..... | 56¾ | ..... | 48¾ | ..... | 20 | 299 | 306 | 379 |
| 19,523 | 18,795 | 38,318 | ..... | ..... | ..... | 38¾ | 61¼ | 76¼ | 308 | 274 | 260 |
| 2,014 | 3,175 | 5,189 | ..... | ..... | ..... | 21¼ | 42½ | 54⅔ | 395 | 311 | 179 |
| 5,800 | ..... | 4,000 | ..... | 07⅜ | ..... | 19⅓ | ..... | 13⅓ | 250 | 210 | 260 |
| 409 | 25,854 | 26,263 | ..... | ..... | ..... | 01⅛ | 71⅛ | 71⅔ | 294 | 259 | 210 |
| ..... | ..... | ..... | 09⅔ | 07¼ | 17½ | ..... | ..... | ..... | 248 | 258 | 235 |
| 14,753 | 8,781 | 23,534 | ..... | ..... | ..... | 14⅓ | 10 | 23 | 425 | 388 | 342 |
| 1,974 | ..... | 1,710 | ..... | 02¼ | ..... | 14⅓ | ..... | 12¼ | 324 | 272 | 306 |
| 2,326 | 2,746 | 6,072 | ..... | ..... | ..... | 11½ | 10¾ | 21 | 289 | 225 | 228 |
| 68,000 | 56,538 | 124,538 | ..... | ..... | ..... | 12⅞ | 12⅓ | 23⅔ | 330 | 292 | 256 |
| 63 | 1,651 | 1,714 | ..... | ..... | ..... | 02½ | 06⅝ | 06⅞ | 404 | 403 | 376 |
| 15,000 | ..... | 14,000 | ..... | 12½ | ..... | 15⅔ | ..... | 14¾ | 190 | 200 | 208 |
| 15,000 | 97 | 15,097 | ..... | ..... | ..... | 37½ | 003⅞ | 37½ | 160 | 143 | 249 |
| 182,250 | ..... | 40,800 | ..... | 143⅝ | ..... | 64⅞ | ..... | 14½ | 224 | 164 | 528 |
| ..... | ..... | ..... | 08 | 07⅓ | 16 | ..... | ..... | ..... | 521 | 540 | 382 |
| 36,561 | 9,849 | 46,410 | ..... | ..... | ..... | 43 | 20½ | 54⅞ | 525 | 480 | 152 |
| 1,024 | 758 | 1,782 | ..... | ..... | ..... | 10½ | 08¾ | 18⅓ | 194 | 181 | 291 |
| 10,014 | ..... | 5,161 | ..... | 15⅔ | ..... | 24⅔ | ..... | 12⅔ | 342 | 274 | 291 |
| ..... | ..... | ..... | 10½ | 18 | 40 | ..... | ..... | ..... | 175 | 169 | 177 |
| 9,904 | ..... | ..... | ..... | 32½ | 17 | 11⅛ | ..... | ..... | 237 | 249 | 271 |
| 4,034 | 3,865 | 7,899 | ..... | ..... | ..... | 14⅔ | 16½ | 28½ | 190 | 188 | 197 |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | |
|---|---|---|---|---|---|---|
| Character of Industry. | Aggregate amount of wages paid. | | | Increase in aggregate of wages paid. | | |
| | 1892. | 1893. | 1894. | 1893 over 1892 | 1894 over 1893. | 1894 over 1892. |
| Heating Apparatus, ..... | $17,457 | $19,429 | $20,560 | $1,972 | $1,131 | $3,103 |
| Ornamental Iron Work,..... | 51,000 | 49,000 | 50,000 | ..... | 1,000 | ..... |
| Agricultural Implements, ..... | 6,848 | 7,269 | 5,226 | 421 | ..... | ..... |
| Water Wheels, ..... | 39,500 | 55,600 | 38,060 | 16,100 | ..... | ..... |
| Agricultural Implements, &c.,.. | 192,430 | 174,579 | 168,620 | ..... | ..... | ..... |
| Cotton and Woolen Goods, ..... | 52,836 | 44,373 | 39,226 | ..... | ..... | ..... |
| Carpet Yarn, ..... | 31,200 | 21,000 | 21,000 | ..... | ..... | ..... |
| Calico Printing, ..... | 360,000 | 330,000 | 397,000 | ..... | 67,000 | 37,000 |
| Cotton and Woolen Goods, ..... | 43,798 | 26,252 | 10,421 | ..... | ..... | ..... |
| Cotton and Woolen Goods, ..... | 17,978 | 17,871 | 18,235 | ..... | 364 | 257 |
| Silk Plushes, ..... | 40,100 | 35,668 | 31,335 | ..... | ..... | ..... |
| Silk, ..... | 118,578 | 101,357 | 111,736 | ..... | 10,379 | ..... |
| Total, ..... | $7,682,078 | $6,162,270 | $5,820,475 | ..... | ..... | ..... |

*facturing in Pennsylvania.*

WAGES.

| Decrease in aggregate of wages paid. | | | Percentage of increase in aggregate of wages paid. | | | Percentage of decrease in aggregate of wages paid. | | | Average per capita of wages paid. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892 | 1892. | 1893. | 1894 |
| ..... ..... | ..... | ..... | 11⅓ | 05⅞ | 17¾ | ..... | ..... | ..... | $388 | $396 | $361 |
| $2,000 | ..... | $1,000 | ..... | 02 | ..... | 04 | ..... | 01⅞ | 443 | 475 | 455 |
| ..... | $2,043 | 1,622 | 06¼ | ..... | ..... | ..... | 28¼ | 23⅔ | 428 | 428 | 475 |
| ..... | 17,540 | 1,440 | 40¾ | ..... | ..... | ..... | 31½ | 36⅓ | 416 | 428 | 380 |
| 17,851 | 5,959 | 23,810 | ..... | ..... | ..... | 09¼ | 03⅜ | 12⅓ | 385 | 342 | 345 |
| 8,463 | 5,147 | 13,610 | ..... | ..... | ..... | 16 | 11⅔ | 25¾ | 348 | 292 | 377 |
| 10,200 | ..... | 10,200 | ..... | ..... | ..... | 32⅔ | ..... | 32⅔ | 480 | 420 | 420 |
| 30,000 | ..... | ..... | ..... | 20⅓ | 10⅓ | 08⅓ | ..... | ..... | 450 | 440 | 481 |
| 17,546 | 15,831 | 33,377 | ..... | ..... | ..... | 40 | 60½ | 76⅓ | 351 | 228 | 218 |
| 107 | ..... | ..... | ..... | 02 | 01½ | 006 | ..... | ..... | 382 | 237 | 331 |
| 4 432 | 4,333 | 8,765 | ..... | ..... | ..... | 11 | 12⅛ | 21⅞ | 440 | 414 | 385 |
| 17,221 | ..... | 6,842 | ..... | 10¼ | ..... | 14½ | ..... | 05¾ | 217 | 217 | 233 |
| $1,519,808 | $341,795 | $1,861,603 | ..... | ..... | ..... | .19¾ | .05½ | 24¼ | $329 | $311 | $305 |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Increase in average per capita of wages paid. | | | Decrease in average per capita of wages paid. | | | Percentage of increase per capita of wages paid. | | |
| | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| *Iron.* | | | | | | | | | |
| Bolts, Nuts, Bar Iron, &c., | ..... | $37 | ..... | $45 | ..... | $8 | ..... | 10¾ | ..... |
| Builders' Hardware, | $30 | ..... | ..... | ..... | $80 | 50 | 07 | ..... | ..... |
| Boilers, Heaters, &c.,* | ..... | ..... | ..... | 27 | 323 | 350 | ..... | ..... | ..... |
| Skelp Iron, | ..... | ..... | ..... | 64 | 103 | 167 | ..... | ..... | ..... |
| Hardware and Tacks, | ..... | ..... | ..... | 2 | 91 | 93 | ..... | ..... | ..... |
| Steel and Iron Structural Material, | ..... | ..... | ..... | 53 | 63 | 116 | ..... | ..... | ..... |
| Cars, Engines, Frogs, Switches, &c., | ..... | ..... | ..... | 42 | 61 | 103 | ..... | ..... | ..... |
| Stoves, Heaters, &c., | ..... | ..... | ..... | 57 | 106 | 163 | ..... | ..... | ..... |
| Builders' Hardware, | ..... | ..... | ..... | 29 | 30 | 59 | ..... | ..... | ..... |
| Foundry and Machine Works, | ..... | ..... | ..... | 4 | 43 | 47 | ..... | ..... | ..... |
| Engines, Saw Mills, Separators, &c., | ..... | ..... | ..... | 24 | 37 | 61 | ..... | ..... | ..... |
| Ice Making Machinery, Engines, &c., | ..... | 1 | ..... | 42 | ..... | 41 | ..... | 002¼ | ..... |
| Engine and Repair Works, | ..... | 24 | ..... | 36 | ..... | 12 | ..... | 07 | ..... |
| Foundry and Machine Works, | ..... | 127 | $21 | 106 | ..... | ..... | ..... | 39⅔ | 04⅔ |
| Iron and Steel Plates and Bars, | ..... | ..... | ..... | ..... | 234 | 234 | ..... | ..... | ..... |
| Pig Iron,* | ..... | ..... | ..... | 112 | 307 | 419 | ..... | ..... | ..... |
| Pig Iron, &c., | ..... | 54 | 54 | ..... | ..... | ..... | ..... | 12 | 12 |
| Rolling Mill,* | ..... | ..... | ..... | 85 | 290 | 444 | ..... | ..... | ..... |
| Blast Furnace, | ..... | ..... | ..... | ..... | 90 | 90 | ..... | ..... | ..... |
| Boilers and Engines, | ..... | ..... | ..... | 52 | 23 | 75 | ..... | ..... | ..... |
| Blast Furnace, | ..... | 8 | ..... | 159 | ..... | 151 | ..... | 02½ | ..... |
| Blast Furnace, | 69 | ..... | ..... | ..... | 109 | 40 | 30 | ..... | ..... |
| Blast Furnace, | 57 | ..... | 38 | ..... | 19 | ..... | 12 | ..... | 09 |
| Skelp Iron,* | 29 | ..... | ..... | ..... | 273 | 244 | 10⅔ | ..... | ..... |
| Bolts, Nuts and Washers, | ..... | 18 | ..... | 56 | ..... | 38 | ..... | 05½ | ..... |
| Cars, Car Wheels, Castings, &c., | ..... | ..... | ..... | 34 | 23 | 57 | ..... | ..... | ..... |
| Janney Car Coupler, | ..... | ..... | ..... | 51 | 107 | 158 | ..... | ..... | ..... |
| Springs, | ..... | ..... | ..... | 116 | 99 | 215 | ..... | ..... | ..... |
| Brass and Copper Tubes, | ..... | 80 | 75 | 5 | ..... | ..... | ..... | 21 | 19⅓ |
| Bar Iron | ..... | ..... | ..... | 21 | 121 | 142 | ..... | ..... | ..... |

*Plant not operated in 1894.

*facturing in Pennsylvania.*

| WAGES. | | | PRODUCT. | | | | | |
|---|---|---|---|---|---|---|---|---|
| Percentage of decrease per capita of wages paid. | | | Value of product. | | | Increase in value of production. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| 11⅔ | ..... | 02⅛ | $1,030,893 | $872,793 | $762,274 | ..... | ..... | ..... |
| ..... | 18½ | 12½ | 400,000 | 300,000 | 225,000 | ..... | ..... | ..... |
| 08 | ..... | ..... | 45,000 | 50,000 | ..... | $5,000 | ..... | ..... |
| 13 | 24½ | 03½ | 770,424 | 544,679 | 371,695 | ..... | ..... | ..... |
| 01⅓ | 25¾ | 26⅛ | 85,981 | 71,699 | 43,395 | ..... | ..... | ..... |
| 11½ | 15 | 24¾ | 896,571 | 525,360 | 299,025 | ..... | ..... | ..... |
| 09 | 14½ | 22¼ | 633,482 | 449,922 | 335,769 | ..... | ..... | ..... |
| 09½ | 20 | 27¼ | 158,000 | 129,000 | 101,000 | ..... | ..... | ..... |
| 08 | 09 | 16 | 548,649 | 533,645 | 449,622 | ..... | ..... | ..... |
| 01⅓ | 09¾ | 10½ | 333,107 | 316,088 | 298,805 | ..... | ..... | ..... |
| 05⅓ | 09 | 14 | 875,530 | 772,700 | 644,000 | ..... | ..... | ..... |
| 09 | ..... | 08¾ | 820,691 | 545,582 | 352,107 | ..... | ..... | ..... |
| 09½ | ..... | 03⅛ | 67,150 | 52,570 | 41,120 | ..... | ..... | ..... |
| 24⅓ | ..... | ..... | 330,000 | 57,651 | 179,531 | ..... | $121,880 | ..... |
| ..... | 54½ | 54½ | 1,311,496 | 754,048 | 240,943 | ..... | ..... | ..... |
| 26¾ | ..... | ..... | 434,128 | 291,467 | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 631,962 | 534,181 | 123,437 | ..... | ..... | ..... |
| 22⅔ | ..... | ..... | 430,526 | 231,264 | ..... | ..... | ..... | ..... |
| ..... | 47 | 47 | 234,143 | 208,300 | 69,561 | ..... | ..... | ..... |
| 11 | 05½ | 15⅞ | 180,000 | 125,000 | 95,000 | ..... | ..... | ..... |
| 33 | ..... | 31½ | 531,999 | 343,540 | 253,233 | ..... | ..... | ..... |
| ..... | 36⅓ | 17 | 222,920 | 247,828 | 131,580 | 24,908 | ..... | ..... |
| ..... | 04 | ..... | 571,466 | 441,912 | 414,502 | ..... | ..... | ..... |
| ..... | ..... | ..... | 418,000 | 428,000 | ..... | 10,000 | ..... | ..... |
| 14 | ..... | 10 | 121,245 | 135,201 | 82,508 | 13,956 | ..... | ..... |
| 09 | 06⅔ | 15¼ | 600,000 | 520,000 | 417,000 | ..... | ..... | ..... |
| 09 | 22 | 54¼ | 1,455,135 | 1,009,285 | 510,732 | ..... | ..... | ..... |
| 17 | 17⅔ | 32 | 1,139,221 | 704,754 | 331,010 | ..... | ..... | ..... |
| ..... | ..... | ..... | 79,507 | 90,157 | 127,176 | 10,650 | 37,019 | $47,669 |
| 05½ | 33¼ | 37⅓ | 346,038 | 288,421 | 175,115 | ..... | ..... | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Increase in average per capita of wages paid. | | | Decrease in average per capita of wages paid. | | | Percentage of increase per capita of wages paid. | | |
| | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| Bar Iron, | ..... | ..... | ..... | $32 | $156 | $188 | ..... | ..... | ..... |
| Stoves, | ..... | ..... | ..... | 36 | 150 | 186 | ..... | ..... | ..... |
| Stoves, Furnaces and Ranges, | ..... | ..... | ..... | 9 | 153 | 162 | ..... | ..... | ..... |
| Pig Iron,* | ..... | ..... | ..... | 72 | 349 | 421 | ..... | ..... | ..... |
| Bridges, Buildings, &c., | ..... | ..... | ..... | ..... | 186 | 186 | ..... | ..... | ..... |
| Bridges, &c., | ..... | ..... | ..... | 3 | 13 | 16 | ..... | ..... | ..... |
| Structural Work, | $26 | $144 | $170 | ..... | ..... | ..... | .06½ | 33¾ | 42½ |
| Iron and Steel Construction, | 3 | ..... | ..... | ..... | 54 | 51 | 005⅔ | ..... | ..... |
| Iron Foundry and Construction, | ..... | ..... | ..... | 79 | 30 | 109 | ..... | ..... | ..... |
| Light Locomotives, | ..... | ..... | ..... | 37 | 62 | 99 | ..... | ..... | ..... |
| Boiler, Tank and Plate Iron Work, | ..... | ..... | ..... | 4 | 13 | 17 | ..... | ..... | ..... |
| Sheet Iron, Sheet Steel, &c., | 3 | ..... | ..... | ..... | 19 | 16 | 005¼ | ..... | ..... |
| Iron and Steel Sheets, | ..... | ..... | ..... | 67 | 24 | 91 | ..... | ..... | ..... |
| Sheet Iron and Sheet Steel, | ..... | 21 | ..... | 75 | ..... | 54 | ..... | 04⅛ | ..... |
| Merchant Bar Iron, Steel, &c., | ..... | ..... | ..... | 253 | 150 | 403 | ..... | ..... | ..... |
| Iron and Steel Rolling Mills, | ..... | ..... | ..... | 186 | 151 | 337 | ..... | ..... | ..... |
| Iron and Steel Works, | 46 | ..... | ..... | ..... | 149 | 103 | 07 | ..... | ..... |
| Bar Iron, Nails and Pig Iron, | ..... | ..... | ..... | 33 | 89 | 122 | ..... | ..... | ..... |
| Bar Steel, Railroad and Boat Spikes, | ..... | ..... | ..... | 197 | 29 | 226 | ..... | ..... | ..... |
| Malleable Iron Foundry, | ..... | ..... | ..... | 44 | 70 | 114 | ..... | ..... | ..... |
| Wrought Iron Pipe, | ..... | 32 | ..... | 62 | ..... | 30 | ..... | 08⅓ | ..... |
| Sheet Iron | ..... | ..... | ..... | 100 | 71 | 171 | ..... | ..... | ..... |
| Sheet Iron and Sheet Steel, | ..... | 47 | ..... | 190 | ..... | 143 | ..... | 09 | ..... |
| Sheet Iron and Sheet Steel, | ..... | ..... | ..... | 106 | 30 | 130 | ..... | ..... | ..... |
| Steel, | ..... | ..... | ..... | 18 | 178 | 196 | ..... | ..... | ..... |
| Steel, | 33 | ..... | ..... | ..... | 33 | ..... | 04⅓ | ..... | ..... |
| Steel Works, | ..... | ..... | ..... | 25 | ..... | 25 | ..... | ..... | ..... |
| Iron and Steel Works, | ..... | 29 | ..... | 50 | ..... | 21 | ..... | 04⅔ | ..... |
| Crucibles, | 6 | ..... | 6 | ..... | ..... | ..... | 008 | ..... | 008½ |
| Iron, Steel, Hardware, &c., | ..... | ..... | ..... | 31 | 56 | 87 | ..... | ..... | ..... |
| Crucibles and Open Hearth Steel, | ..... | ..... | ..... | 45 | 98 | 143 | ..... | ..... | ..... |

*Plant not operated in 1894.

*facturing in Pennsylvania.*

| WAGES. | | | PRODUCT. | | | | | |
|---|---|---|---|---|---|---|---|---|
| Percentage of decrease per capita of wages paid. | | | Value of product. | | | Increase in value of production. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| 08½ | 45⅔ | 50¾ | $401,500 | $290,900 | $138,610 | ..... | ..... | ..... |
| 08¼ | 37½ | 43¼ | 122,727 | 112,573 | 76,963 | ..... | ..... | ..... |
| 02 | 32½ | 33¾ | 228,030 | 197,276 | 161,765 | ..... | ..... | ..... |
| 17 | ..... | ..... | 338,625 | 147,179 | ..... | ..... | ..... | ..... |
| ..... | 33⅔ | 34 | 566,732 | 554,480 | 484,048 | ..... | ..... | ..... |
| 006¾ | 03 | 03½ | 210,000 | 305,000 | 265,000 | $95,000 | ..... | $55,000 |
| ..... | ..... | ..... | 478,983 | 361,754 | 208,124 | ..... | ..... | ..... |
| ..... | 10 | 09⅓ | 1,670,445 | 989,194 | 652,975 | ..... | ..... | ..... |
| 15⅔ | 07⅞ | 19¼ | 300,277 | 285,304 | 122,940 | ..... | ..... | ..... |
| 05½ | 09¾ | 14¾ | 423,000 | 355,000 | 258,000 | ..... | ..... | ..... |
| 01 | 32½ | 04¼ | 125,837 | 106,692 | 96,194 | ..... | ..... | ..... |
| ..... | 03¼ | 02¾ | 275,000 | 235,000 | 250,000 | ..... | $15,000 | ..... |
| 10 | 38¾ | 13¼ | 1,590,796 | 1,349,595 | 1,120,465 | ..... | ..... | ..... |
| 13 | ..... | 09¼ | 700,000 | 550,000 | 515,048 | ..... | ..... | ..... |
| 34 | 30¾ | 54½ | 1,007,533 | 689,873 | 389,730 | ..... | ..... | ..... |
| 23⅓ | 24⅔ | 42¾ | 793,388 | 492,038 | 412,575 | ..... | ..... | ..... |
| ..... | 22 | 16⅓ | 8,066,485 | 6,720,292 | 5,724,869 | ..... | ..... | ..... |
| 08½ | 24⅔ | 31⅓ | 550,807 | 319,350 | 236,234 | ..... | ..... | ..... |
| 19½ | 03½ | 22⅔ | 1,491,547 | 914,329 | 739,434 | ..... | ..... | ..... |
| 08 | 13⅓ | 20⅓ | 160,000 | 135,000 | 137,000 | ..... | 2,000 | ..... |
| 14 | ..... | 06¾ | 1,191,995 | 970,295 | 1,000,666 | ..... | 30,371 | ..... |
| 16 | 13⅓ | 27 | 1,578,421 | 1,437,235 | 1,232,131 | ..... | ..... | ..... |
| 27 | ..... | 20 | 324,614 | 290,830 | 260,545 | ..... | ..... | ..... |
| 14 | 04½ | 17 | 408,000 | 309,000 | 281,698 | ..... | ..... | ..... |
| 03 | 27⅓ | 29¼ | 1,017,436 | 749,979 | 656,013 | ..... | ..... | ..... |
| ..... | 04¼ | ..... | 1,600,000 | 1,108,000 | 821,309 | ..... | ..... | ..... |
| 04½ | ..... | 04½ | 1,194,940 | 940,627 | 818,350 | ..... | ..... | ..... |
| 08 | ..... | 03¼ | 1,145,303 | 337,741 | 96,160 | ..... | ..... | ..... |
| ..... | ..... | ..... | 162,540 | 120,790 | 110,000 | ..... | ..... | ..... |
| 06 | 11¼ | 16½ | 3,656,136 | 2,393,017 | 1,474,175 | ..... | ..... | ..... |
| 07 | 15½ | 21⅓ | 1,037,867 | 760,276 | 564,557 | ..... | ..... | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Increase in average per capita of wages paid. | | | Decrease in average per capita of wages paid. | | | Percentage of increase per capita of wages paid. | | |
| | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| Iron, | ..... | ..... | ..... | $98 | $274 | $372 | ..... | ..... | ..... |
| Iron, | $5 | ..... | ..... | ..... | 63 | 58 | 006 | ..... | ..... |
| Rolling Skelp Iron, | ..... | ..... | ..... | 219 | 73 | 292 | ..... | ..... | ..... |
| Iron and Steel, Hoop and Band, &c., | 26 | ..... | ..... | ..... | 79 | 53 | 05¼ | ..... | ..... |
| Brass Founders, Iron Pipe, &c., | 5 | ..... | ..... | ..... | 102 | 97 | 66 | ..... | ..... |
| Rolling Mill Machinery, | 4 | ..... | ..... | ..... | 148 | 144 | 006 | ..... | ..... |
| Foundry and Machine Shops, | ..... | ..... | ..... | 80 | 185 | 265 | ..... | ..... | ..... |
| Brass Founders, Machinists, &c., | 4 | ..... | ..... | ..... | 90 | 86 | 006 | ..... | ..... |
| Iron and Steel, | ..... | ..... | ..... | 42 | 15 | 57 | ..... | ..... | ..... |
| Pig Metal, | 46 | ..... | ..... | ..... | 154 | 108 | 07 | ..... | ..... |
| Founders and Machinists, | ..... | $21 | ..... | 111 | ..... | 90 | ..... | 03⅔ | ..... |
| General Machinery, | 13 | 29 | $42 | ..... | ..... | ..... | 02½ | 05⅓ | 08 |
| Engines and Boilers, | ..... | 35 | ..... | 36 | ..... | 1 | ..... | 06⅓ | ..... |
| Boilers, | ..... | ..... | ..... | 79 | 23 | 102 | ..... | ..... | ..... |
| Radiators, | ..... | 3 | ..... | 44 | ..... | 41 | ..... | 01 | ..... |
| Iron Products, | ..... | ..... | ..... | 4 | 24 | 28 | ..... | ..... | ..... |
| Axles, | 18 | ..... | ..... | ..... | 49 | 31 | 63 | ..... | ..... |
| Roll Foundry, | ..... | ..... | ..... | 50 | 63 | 113 | ..... | ..... | ..... |
| Iron Foundry, | ..... | 87 | 27 | 60 | ..... | ..... | ..... | 21⅔ | 06 |
| Foundry, | ..... | ..... | ..... | 61 | 22 | 83 | ..... | ..... | ..... |
| Iron Foundry, | ..... | ..... | ..... | 25 | 198 | 223 | ..... | ..... | ..... |
| Rolling Mill and Tin Plate Machinery, &c., | ..... | ..... | ..... | 30 | 68 | 98 | ..... | ..... | ..... |
| Iron, Steel and Brass Castings, &c., | ..... | ..... | ..... | 21 | 150 | 171 | ..... | ..... | ..... |
| Pig Iron, | ..... | ..... | ..... | 25 | 101 | 126 | ..... | ..... | ..... |
| Steel Castings, | ..... | 18 | ..... | 62 | ..... | 44 | ..... | 04¼ | ..... |
| Steel Castings, | ..... | ..... | ..... | 53 | 121 | 174 | ..... | ..... | ..... |
| Merchant Bar Iron, | ..... | ..... | ..... | 186 | 168 | 354 | ..... | ..... | ..... |
| Steel and Copper, | ..... | ..... | ..... | 55 | 11 | 66 | ..... | ..... | ..... |
| Iron Beams, Girders, &c., | ..... | ..... | ..... | 10 | 79 | 89 | ..... | ..... | ..... |
| Iron Founders, | ..... | ..... | ..... | 60 | 60 | 120 | ..... | ..... | ..... |
| Iron Founders, | ..... | 106 | ..... | 106 | ..... | ..... | ..... | 02 | ..... |
| Stoves, | ..... | ..... | ..... | 20 | 202 | 222 | ..... | ..... | ..... |

*facturing in Pennsylvania.*

| WAGES. | | | PRODUCT. | | | | | |
|---|---|---|---|---|---|---|---|---|
| Percentage of decrease per capita of wages paid. | | | Value of product. | | | Increase in value of production. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| 19 | 68½ | 74⅓ | $413,283 | $207,492 | $72,000 | ..... | ..... | ..... |
| ..... | 08 | 07½ | 2,080,000 | 1,250,000 | 757,000 | ..... | ..... | ..... |
| 47½ | 30¼ | 63½ | 811,875 | 526,121 | 303,243 | ..... | ..... | ..... |
| ..... | 15⅛ | 10¾ | 380,669 | 329,989 | 251,877 | ..... | ..... | ..... |
| ..... | 13⅔ | 13 | 331,246 | 272,000 | 226,292 | ..... | ..... | ..... |
| ..... | 21¾ | 21¼ | 265,175 | 142,265 | 52,565 | ..... | ..... | ..... |
| 12 | 32 | 40 | 158,309 | 93,726 | 103,750 | ..... | $10,024 | ..... |
| ..... | 13 | 12½ | 352,308 | 284,182 | 292,003 | ..... | 7,821 | ..... |
| 07 | 02⅔ | 09⅓ | 2,621,000 | 2,390,000 | 2,220,000 | ..... | ..... | ..... |
| ..... | 23⅓ | 17⅓ | 1,197,185 | 1,222,099 | 944,035 | $24,914 | ..... | ..... |
| 16 | ..... | 13 | 607,000 | 262,544 | 259,888 | ..... | ..... | ..... |
| ..... | ..... | ..... | 448,277 | 421,312 | 285,249 | ..... | ..... | ..... |
| 06 | ..... | .001¾ | 1,236,360 | 1,057,692 | 775,919 | ..... | ..... | ..... |
| 15½ | 54⅓ | 20⅓ | 225,666 | 250,000 | 140,000 | 24,334 | ..... | ..... |
| 12 | ..... | 11 | 96,564 | 114,102 | 125,776 | 17,538 | 11,674 | $29,212 |
| 01 | 05½ | 06⅓ | 4,596,337 | 4,119,147 | 2,916,943 | ..... | ..... | ..... |
| ..... | 08¼ | 05⅓ | 25,000 | 21,000 | 15,787 | ..... | ..... | ..... |
| 07½ | 10¼ | 17 | 378,389 | 435,563 | 322,230 | 57,174 | ..... | ..... |
| 13¼ | ..... | ..... | 75,426 | 36,439 | 39,816 | ..... | 3,377 | ..... |
| 11 | 04½ | 15⅛ | 183,496 | 172,054 | 151,727 | ..... | ..... | ..... |
| 04 | 35⅓ | 37¾ | 75,422 | 72,300 | 321,133 | ..... | 248,833 | 245,711 |
| 05½ | 13¼ | 18 | 229,441 | 182,318 | 140,000 | ..... | ..... | ..... |
| 03½ | 25½ | 28 | 823,498 | 618,048 | 330,860 | ..... | ..... | ..... |
| 03½ | 15 | 17⅞ | 2,078,694 | 1,389,497 | 1,417,677 | ..... | 28,180 | ..... |
| 12½ | ..... | 09 | 229,896 | 95,802 | 91,780 | ..... | ..... | ..... |
| 07⅔ | 20 | 26 | 864,638 | 655,589 | 478,698 | ..... | ..... | ..... |
| 28 | 36 | 53⅔ | 801,180 | 556,440 | 284,200 | ..... | ..... | ..... |
| 10 | 02¼ | 12¼ | 4,529,498 | 3,835,892 | 3,900,006 | ..... | 64,114 | ..... |
| 01½ | 12½ | 14 | 153,209 | 149,605 | 155,569 | ..... | 5,964 | 2,360 |
| 10 | 11⅛ | 20 | 200,000 | 160,000 | 50,529 | ..... | ..... | ..... |
| 17⅔ | ..... | ..... | 750,000 | 600,000 | 450,000 | ..... | ..... | ..... |
| 03½ | 35 | 39 | 54,364 | 51,767 | 36,566 | ..... | ..... | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Increase in average per capita of wages paid. | | | Decrease in average per capita of wages paid. | | | Percentage of increase per capita of wages paid. | | |
| | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| Iron Foundry, | ..... | ..... | ..... | $4 | $22 | $26 | ..... | ..... | ..... |
| Boiler Makers, | $15 | $19 | $34 | ..... | ..... | ..... | 02¾ | 03⅔ | 06⅔ |
| Iron Founders, | ..... | 274 | 105 | 169 | ..... | ..... | ..... | 56 | 15⅞ |
| Boiler Makers, | ..... | ..... | ..... | 150 | 35 | 185 | ..... | ..... | ..... |
| Boiler Makers,* | ..... | ..... | ..... | 90 | ..... | ..... | ..... | ..... | ..... |
| Engines, | 134 | ..... | ..... | ..... | 268 | 134 | 20⅓ | ..... | ..... |
| Malleable Iron Castings, | ..... | 3 | ..... | 59 | ..... | 56 | ..... | 007 | ..... |
| Engines and Oil Well Supplies, | ..... | ..... | ..... | 93 | 29 | 122 | ..... | ..... | ..... |
| Engines, | 73 | ..... | 33 | ..... | 40 | ..... | 13¾ | ..... | 06¼ |
| Boiler Works, | ..... | ..... | ..... | 10 | 123 | 133 | ..... | ..... | ..... |
| Engines, | ..... | ..... | ..... | 43 | 171 | 214 | ..... | ..... | ..... |
| Iron Works, | ..... | 5 | ..... | 66 | ..... | 61 | ..... | 01¼ | ..... |
| Blast Furnace, | ..... | ..... | ..... | 41 | 61 | 102 | ..... | ..... | ..... |
| Iron, | 4 | ..... | ..... | ..... | 148 | 144 | 01⅛ | ..... | ..... |
| Iron Works,* | ..... | ..... | ..... | 59 | ..... | ..... | ..... | ..... | ..... |
| Pig and Skelp Iron, | ..... | ..... | ..... | 30 | 155 | 185 | ..... | ..... | ..... |
| Muck Bar and Nails (Iron), | 69 | 141 | 210 | ..... | ..... | ..... | 40⅔ | 61⅓ | 12⅓ |
| Steam Boilers, | ..... | ..... | ..... | 10 | 30 | 40 | ..... | ..... | ..... |
| Iron and Steel, | ..... | ..... | ..... | 4 | 96 | 100 | ..... | ..... | ..... |
| Iron, | ..... | ..... | ..... | 23 | 68 | 91 | ..... | ..... | ..... |
| Foundry and Machine Shop, | ..... | 42 | 12 | 30 | ..... | ..... | ..... | 08¾ | 02¼ |
| Iron Foundry, | ..... | 12 | ..... | 127 | ..... | 115 | ..... | 02½ | ..... |
| Rolling Mill, | ..... | 26 | 8 | 18 | ..... | ..... | ..... | 05⅓ | 01⅔ |
| Pig Iron, | 10 | ..... | ..... | ..... | 148 | 38 | 02 | ..... | ..... |
| Pig Iron, Merchant, Bar, &c., | ..... | ..... | ..... | 31 | 41 | 72 | ..... | ..... | ..... |
| Locomotives, | ..... | ..... | ..... | 53 | 116 | 169 | ..... | ..... | ..... |
| Rolling Mill Machinery, | ..... | ..... | ..... | 37 | 108 | 145 | ..... | ..... | ..... |
| Iron and Steel, | ..... | ..... | ..... | 41 | 52 | 93 | ..... | ..... | ..... |
| Steel Rails, Billets, &c., | 67 | 18 | 85 | ..... | ..... | ..... | 18⅔ | 04¼ | 23⅔ |
| Steel, | ..... | ..... | ..... | 4 | 247 | 51 | ..... | ..... | ..... |
| Repairing and Building Passenger and Freight Cars, | ..... | ..... | ..... | 72 | 49 | 121 | ..... | ..... | ..... |

*Plant not operated in 1894.

*facturing in Pennsylvania.*

| WAGES. | | | PRODUCT. | | | | | |
|---|---|---|---|---|---|---|---|---|
| Percentage of decrease per capita of wages paid. | | | Value of product. | | | Increase in value of production. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| 008 | 04¼ | 05 | $208,091 | $240,644 | $322,606 | $32,553 | $81,962 | $114,515 |
| ..... | ..... | ..... | 60,400 | 72,150 | 80,350 | 11,750 | 8,200 | 19,950 |
| 25½ | ..... | ..... | 448,000 | 251,000 | 265,230 | ..... | 14,230 | ..... |
| 24 | 07⅓ | 30 | 350,000 | 170,000 | 40,000 | ..... | ..... | ..... |
| 13 | ..... | ..... | 650,000 | 350,000 | ..... | ..... | ..... | ..... |
| ..... | 33½ | 20⅓ | 340,000 | 97,000 | 93,000 | ..... | ..... | ..... |
| 12 | ..... | 11½ | 292,364 | 227,609 | 159,372 | ..... | ..... | ..... |
| 16 | 06 | 21⅓ | 200,113 | 152,078 | 161,837 | ..... | ..... | ..... |
| ..... | 07 | ..... | 144,000 | 112,000 | 110,000 | ..... | ..... | ..... |
| 01⅓ | 19 | 20 | 108,694 | 74,919 | 36,496 | ..... | ..... | ..... |
| 08 | 38 | 43 | 120,000 | 100,000 | 60,000 | ..... | ..... | ..... |
| 13½ | ..... | 12⅓ | 815,000 | 710,000 | 605,000 | ..... | ..... | ..... |
| 14 | 24 | 36 | 375,580 | 378,796 | 239,210 | 3,216 | ..... | ..... |
| ..... | 41⅛ | 41⅛ | 283,106 | 214,642 | 175,900 | ..... | ..... | ..... |
| 09 | ..... | ..... | 653,472 | 554,900 | ..... | ..... | ..... | ..... |
| 07⅔ | 43⅔ | 47⅓ | 832,800 | 500,000 | 172,140 | ..... | ..... | ..... |
| ..... | ..... | ..... | 150,000 | 110,000 | 124,880 | ..... | 14,880 | ..... |
| 02 | 05¾ | 07⅓ | 203,260 | 186,533 | 147,675 | ..... | ..... | ..... |
| 008 | 19⅓ | 20 | 10,642,000 | 8,578,000 | 5,725,839 | ..... | ..... | ..... |
| 04½ | 13¾ | 17½ | 148,000 | 159,000 | 159,000 | 11,000 | ..... | 11,000 |
| 06 | ..... | ..... | 45,000 | 40,000 | 50,000 | ..... | 10,000 | 5,000 |
| 20 | ..... | 19¼ | 277,984 | 174,952 | 95,680 | ..... | ..... | ..... |
| 03½ | ..... | ..... | 432,594 | 321,113 | 349,790 | ..... | 28,677 | ..... |
| ..... | 02⅔ | 08⅓ | 1,976,889 | 1,628,926 | 1,118,094 | ..... | ..... | ..... |
| 10 | 14 | 22 | 1,650,709 | 936,310 | 825,886 | ..... | ..... | ..... |
| 08 | 18¼ | 24½ | 7,180,659 | 7,687,457 | 2,944,380 | 506,798 | ..... | ..... |
| 06 | 18¾ | 23⅔ | 67,488 | 73,519 | 41,926 | 6,031 | ..... | ..... |
| 06⅓ | 08⅓ | 14⅛ | 46,224,755 | 49,142,076 | 44,445,521 | 2,917,321 | ..... | ..... |
| ..... | ..... | ..... | 4,425,876 | 2,068,251 | 1,764,328 | ..... | ..... | ..... |
| 007 | 45⅛ | 09⅓ | 718,998 | 364,730 | 99,125 | ..... | ..... | ..... |
| 11½ | 09 | 19⅔ | 3,850,487 | 3,446,430 | 2,430,925 | ..... | ..... | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Increase in average per capita of wages paid. | | | Decrease in average per capita of wages paid. | | | Percentage of increase per capita of wages paid. | | |
| | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892 |
| New Locomotives and Repairs, | ..... | ..... | ..... | $63 | $29 | $92 | ..... | ..... | ..... |
| Acid Open Hearth Steel Plates and Sheets, | $3 | ..... | ..... | ..... | 83 | 80 | 006 | ..... | ..... |
| Boilers, Plate and Sheet Iron Work, | $6 | $47 | $133 | ..... | ..... | ..... | 19 | 09 | 30 |
| Bar Iron, Railroad Spikes, &c., | ..... | 45 | 16 | 29 | ..... | ..... | ..... | 10 | 03⅛ |
| Locomotives, | ..... | ..... | ..... | 78 | 86 | 164 | ..... | ..... | ..... |
| Merchant Iron, | ..... | ..... | ..... | 123 | 163 | 286 | ..... | ..... | ..... |
| Bar Iron, | ..... | ..... | ..... | 27 | 24 | 51 | ..... | ..... | ..... |
| Steel-tired Car Wheels, | ..... | ..... | ..... | 8 | 36 | 44 | ..... | ..... | ..... |
| Drop Forgings, | ..... | 96 | 19 | 77 | ..... | ..... | ..... | 20 | 04 |
| Stoves, Ranges and Furnaces, | ..... | 31 | 28 | 3 | ..... | ..... | ..... | 06 | 05⅓ |
| Car Wheels, Car Axles and Cars, | ..... | 4 | ..... | 30 | ..... | 26 | ..... | 01¼ | ..... |
| Locomotives, Stationary Engines, Boilers, &c., | ..... | ..... | ..... | 80 | 7 | 87 | ..... | ..... | ..... |
| Merchant Iron, | 17 | ..... | ..... | ..... | 59 | 42 | 03½ | ..... | ..... |
| Iron Works, | ..... | ..... | ..... | 42 | 50 | 92 | ..... | ..... | ..... |
| Iron Foundry, | ..... | 9 | ..... | 44 | ..... | 35 | ..... | 01⅔ | ..... |
| Tool Manufacturers, | ..... | ..... | ..... | 34 | 95 | 129 | ..... | ..... | ..... |
| Car Wheels, | ..... | 10 | ..... | 41 | ..... | 31 | ..... | 02 | ..... |
| Stoves, Heaters, Ranges, &c., | ..... | ..... | ..... | 17 | 86 | 103 | ..... | ..... | ..... |
| Power Transmitting Machinery, | 4 | 28 | 32 | ..... | ..... | ..... | 009 | 06½ | 07⅔ |
| Boiler and Tank Plates, | ..... | ..... | ..... | 118 | 42 | 160 | ..... | ..... | ..... |
| Foundry and Machine Shop, | 42 | ..... | ..... | ..... | 66 | 24 | 08⅓ | ..... | ..... |
| Machine Tools and Steam Hammers, | 5 | ..... | ..... | ..... | 135 | 130 | 008 | ..... | ..... |
| Pig Iron, | ..... | ..... | ..... | 38 | 34 | 72 | ..... | ..... | ..... |
| Foundry and Machinery, | 15 | ..... | ..... | ..... | 31 | 16 | 03½ | ..... | ..... |
| Pig Iron, Cut Nails, &c., | 23 | ..... | ..... | ..... | 199 | 176 | 06⅓ | ..... | ..... |
| Iron and Steel Nails, &c., | ..... | ..... | ..... | 23 | 144 | 167 | ..... | ..... | ..... |
| Bar Iron and Forgings, | ..... | ..... | ..... | 73 | 48 | 121 | ..... | ..... | ..... |
| Stoves, Ranges, &c., | ..... | ..... | ..... | 76 | 8 | 84 | ..... | ..... | ..... |
| Boilers, | 55 | ..... | 24 | ..... | 31 | ..... | 10⅓ | .... | 04½ |
| Steam Engines and Boilers, | 37 | 43 | 80 | ..... | ..... | ..... | 11⅓ | 12½ | 25 |
| Saws, Tools, &c., | ..... | ..... | ..... | 99 | 43 | 142 | ..... | ..... | ..... |

*facturing in Pennsylvania.*

| WAGES. | | | PRODUCT. | | | | | |
|---|---|---|---|---|---|---|---|---|
| Percentage of decrease per capita of wages paid. | | | Value of product. | | | Increase in value of production. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| 11 | 05½ | 15⅔ | $3,916,389 | $3,593,017 | $3,000,703 | ..... | ..... | ..... |
| ..... | 15¾ | 15¼ | 789,810 | 1,082,070 | 1,200,000 | $292,260 | $117,930 | $410,190 |
| ..... | ..... | ..... | 54,875 | 67,042 | 54,760 | 12,167 | ..... | ..... |
| 05⅔ | ..... | ..... | 123,862 | 90,664 | 100,140 | ..... | 9,476 | ..... |
| 12⅔ | 16⅛ | 26⅞ | 1,128,902 | 1,307,219 | 604,738 | 178,317 | ..... | ..... |
| 20 | 33 | 46¼ | 321,947 | 171,050 | 107,716 | ..... | ..... | ..... |
| 08 | 07⅔ | 15 | 325,037 | 258,093 | 193,450 | ..... | ..... | ..... |
| 02 | 09⅔ | 11⅔ | 172,882 | 167,171 | 103,823 | ..... | ..... | ..... |
| 15⅔ | ..... | ..... | 94,653 | 66,407 | 78,021 | ..... | 11,614 | ..... |
| 006 | ..... | ..... | 512,681 | 525,297 | 410,536 | 12,616 | ..... | ..... |
| 08⅔ | ..... | 07⅔ | 1,565,292 | 129,649 | 155,641 | ..... | 25,992 | ..... |
| 16¼ | 01½ | 17¾ | 875,738 | 692,414 | 462,408 | ..... | ..... | ..... |
| ..... | 11½ | 08½ | 1,740,595 | 1,429,979 | 888,510 | ..... | ..... | ..... |
| 06 | 07¾ | 13⅓ | 393,000 | 368,000 | 268,000 | ..... | ..... | ..... |
| 08 | ..... | 06 | 658,729 | 543,436 | 575,000 | ..... | 31,564 | ..... |
| 07½ | 22⅓ | 28⅛ | 326,546 | 281,067 | 245,528 | ..... | ..... | ..... |
| 08 | ..... | 05¾ | 457,830 | 358,871 | 294,143 | ..... | ..... | ..... |
| 02⅔ | 13⅞ | 16⅛ | 240,000 | 224,000 | 177,098 | ..... | ..... | ..... |
| ..... | ..... | ..... | 361,367 | 369,807 | 230,727 | ..... | 8,440 | ..... |
| 21¾ | 10 | 03 | 500,473 | 326,107 | 146,960 | ..... | ..... | ..... |
| ..... | 12 | 04¾ | 70,720 | 51,550 | 28,300 | ..... | ..... | ..... |
| ..... | 21¼ | 02 | 828,199 | 940,343 | 277,815 | 112,144 | ..... | ..... |
| 07⅓ | 07 | 13⅞ | 2,034,823 | 1,452,436 | 1,102,142 | ..... | ..... | ..... |
| ..... | 07 | 03¾ | 510,000 | 466,000 | 433,000 | ..... | ..... | ..... |
| ..... | 50⅔ | 47⅔ | 702,[illegible] | 763,173 | 571,217 | 60,923 | ..... | ..... |
| 04½ | 29 | 32¼ | 2,025,000 | 1,130,000 | 788,500 | ..... | ..... | ..... |
| 14 | 10¾ | 23⅓ | 312,033 | 198,905 | 94,128 | ..... | ..... | ..... |
| 16¼ | 02 | 18 | 161,148 | 153,502 | 144,647 | ..... | ..... | ..... |
| ..... | 05⅓ | ..... | 24,169 | 38,172 | 40,316 | 14,003 | 2,144 | 16,147 |
| ..... | ..... | ..... | 70,000 | 60,000 | 45,000 | ..... | ..... | ..... |
| 17¼ | 09 | 24⅔ | 1,839,678 | 1,576,406 | 1,485,561 | ..... | ..... | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Increase in average per capita of wages paid. | | | Decrease in average per capita of wages paid. | | | Percentage of increase per capita of wages paid. | | |
| | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| Files, | $15 | ..... | ..... | ..... | $18 | $3 | 03 | ..... | ..... |
| Cast Iron Pipe, | 20 | ..... | ..... | ..... | 42 | 22 | 04¼ | ..... | ..... |
| Car Wheels, &c., | 78 | ..... | ..... | ..... | 425 | 347 | 08¾ | ..... | ..... |
| Foundry, | ..... | ..... | ..... | $23 | 26 | 49 | ..... | ..... | ..... |
| Merchant Bar Iron, | 23 | ..... | ..... | ..... | 138 | 115 | 04¾ | ..... | ..... |
| Railroad Equipment, &c., | ..... | ..... | ..... | 67 | 131 | 198 | ..... | ..... | ..... |
| Wrought Iron Pipe, | 1 | ..... | ..... | ..... | 58 | 57 | 002 | ..... | ..... |
| Blast Furnace, | ..... | ..... | ..... | 40 | 112 | 152 | ..... | ..... | ..... |
| Sheet and Plate Iron and Steel, | 9 | $73 | $82 | ..... | ..... | ..... | 01½ | 12¼ | 14 |
| Cut Nails, | ..... | ..... | ..... | 35 | 73 | 108 | ..... | ..... | ..... |
| Foundry and Machine Work, | ..... | ..... | ..... | 17 | 34 | 51 | ..... | ..... | ..... |
| Chain Works, &c., | ..... | ..... | ..... | 159 | 54 | 213 | ..... | ..... | ..... |
| Metal and Wood, | 29 | 3 | 32 | ..... | ..... | ..... | 06¾ | 006 | 07½ |
| Electric Street Cars, | ..... | 141 | 112 | 29 | ..... | ..... | ..... | 26⅛ | 19⅔ |
| Tacks and Nails, | ..... | 43 | 28 | 15 | ..... | ..... | ..... | 10⅔ | 06⅔ |
| Sheet Steel Plates, &c., | 19 | ..... | ..... | ..... | 100 | 81 | 02⅞ | ..... | ..... |
| Rails, Bars Splices, &c., | 112 | ..... | ..... | ..... | 217 | 105 | 22⅛ | ..... | ..... |
| Iron and Steel Sheets, | 3 | ..... | ..... | ..... | 134 | 131 | ½ | ..... | ..... |
| Street Railway Rails, Switches, &c., | ..... | 21 | 13 | 8 | ..... | ..... | ..... | 34½ | 02 |
| Merchant Bar Iron, &c., | ..... | 279 | 175 | 105 | ..... | ..... | ..... | 16⅓ | 83⅓ |
| Ship Building, | 6 | 19 | 25 | ..... | ..... | ..... | 01⅛ | 03½ | 04⅔ |
| Iron and Nails, | 22 | ..... | ..... | ..... | 28 | 6 | 06½ | ..... | ..... |
| Foundry and Machine Shop, &c., | 13 | ..... | ..... | ..... | 118 | 105 | 02⅞ | ..... | ..... |
| Pig Iron, | 9 | ..... | ..... | ..... | 50 | 41 | 02⅛ | ..... | ..... |
| Steel Castings, | 28 | ..... | 2 | ..... | 26 | ..... | 06½ | ..... | 005 |
| Wire Nails, | ..... | 55 | ..... | 73 | ..... | 18 | ..... | 15½ | ..... |
| Nails, | 10 | ..... | ..... | ..... | 85 | 75 | 03⅔ | ..... | ..... |
| Blast Furnaces, | ..... | ..... | ..... | 22 | 9 | 31 | ..... | ..... | ..... |
| Steel and Plate Iron, &c., | 28 | ..... | ..... | ..... | 28 | ..... | 05¼ | ..... | ..... |
| Iron and Steel Pipe, &c., | 9 | ..... | ..... | ..... | 19 | 10 | 02⅓ | ..... | ..... |
| Bronze and Brass Castings, | 18 | ..... | ..... | ..... | 68 | 50 | 02¼ | ..... | ..... |
| Steam Engines, Pumping Engines, &c., | 60 | ..... | ..... | ..... | 86 | 26 | 11⅜ | ..... | ..... |

*facturing in Pennsylvania.*

| WAGES. | | | PRODUCT. | | | | | |
|---|---|---|---|---|---|---|---|---|
| Percentage of decrease per capita of wages paid. | | | Value of product | | | Increase in value of production. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| ..... | 03½ | 006 | $284,629 | $253,583 | $232,079 | ..... | ..... | ..... |
| ..... | 08⅞ | 04¾ | 253,586 | 300,417 | 283,061 | $46,831 | ..... | $29,475 |
| ..... | 43¾ | 38⅞ | 731,188 | 766,731 | 405,625 | 35,543 | ..... | ..... |
| 04¼ | 05½ | 09¾ | 90,617 | 103,682 | 67,818 | 13,065 | ..... | ..... |
| ..... | 26⅔ | 23⅓ | 265,000 | 255,000 | 181,400 | ..... | ..... | ..... |
| 18½ | 43½ | 53⅔ | 998,433 | 716,320 | 434,395 | ..... | ..... | ..... |
| ..... | 14⅞ | 14⅔ | 88,735 | 73,231 | 32,609 | ..... | ..... | ..... |
| 08 | 24¼ | 30 | 896,940 | 639,735 | 496,071 | ..... | ..... | ..... |
| ..... | ..... | ..... | 659,285 | 544,636 | 500,371 | ..... | ..... | ..... |
| 08¼ | 18½ | 25⅛ | 409,613 | 367,275 | 269,477 | ..... | ..... | ..... |
| 03 | 06⅛ | 09 | 102,374 | 83,913 | 72,159 | ..... | ..... | ..... |
| 32½ | 16¼ | 43¼ | 175,000 | 120,000 | 61,981 | ..... | ..... | ..... |
| ..... | ..... | ..... | 136,000 | 110,000 | 50,531 | ..... | ..... | ..... |
| 05⅛ | ..... | ..... | 135,400 | 142,800 | 38,358 | 7,400 | ..... | ..... |
| 03⅔ | ..... | ..... | 66,023 | 62,072 | 80,469 | ..... | $18,397 | 14,446 |
| ..... | 14⅓ | 11¾ | 632,717 | 491,462 | 459,996 | ..... | ..... | ..... |
| ..... | 35 | 20⅔ | 380,309 | 618,500 | 81,380 | 238,191 | ..... | ..... |
| ..... | 19⅔ | 19¼ | 448,576 | 422,253 | 427,170 | ..... | 4,917 | ..... |
| 01⅓ | ..... | ..... | 4,483,018 | 3,775,240 | 3,765,097 | ..... | ..... | ..... |
| 49¾ | ..... | ..... | 36,944 | 25,895 | 109,886 | ..... | 83,991 | 72,942 |
| ..... | ..... | ..... | 501,753 | 832,720 | 506,192 | 330,967 | ..... | 4,439 |
| ..... | 07⅔ | 01⅔ | 182,639 | 221,994 | 145,701 | 39,355 | ..... | ..... |
| ..... | 25¾ | 23½ | 533,189 | 887,912 | 271,866 | 354,723 | ..... | ..... |
| ..... | 11⅛ | 09⅓ | 263,390 | 235,275 | 189,825 | ..... | ..... | ..... |
| ..... | 05⅓ | ..... | 54,635 | 120,169 | 108,723 | 65,534 | ..... | 54,088 |
| 16¾ | ..... | 04⅛ | 1,985,091 | 1,715,869 | 1,969,207 | ..... | 253,338 | ..... |
| ..... | 29 | 26½ | 272,423 | 189,088 | 115,862 | ..... | ..... | ..... |
| 05⅔ | 02½ | 08 | 625,044 | 485,618 | 625,647 | ..... | 140,029 | 603 |
| ..... | 05 | ..... | 720,000 | 550,000 | 507,104 | ..... | ..... | ..... |
| ..... | 05 | 02⅔ | 707,552 | 763,661 | 611,412 | 56,109 | ..... | ..... |
| ..... | 08¼ | 06¼ | 150,000 | 130,000 | 50,000 | ..... | ..... | ..... |
| ..... | 14⅔ | 05 | 651,800 | 721,600 | 618,750 | 69,800 | ..... | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Increase in average per capita of wages paid. | | | Decrease in average per capita of wages paid. | | | Percentage of increase per capita of wages paid. | | |
| | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| Iron and Steel Bridge Material, | ..... | ..... | ..... | $41 | $38 | $79 | ..... | ..... | ..... |
| Iron and Steel Cut Nails, | ..... | ..... | ..... | 34 | 138 | 172 | ..... | ..... | ..... |
| Cook Stoves. Ranges, &c., | ..... | ..... | ..... | 92 | 77 | 169 | ..... | ..... | ..... |
| Iron and Steel Boilers, &c., | ..... | ..... | ..... | 16 | 265 | 281 | ..... | ..... | ..... |
| Pig Iron, | ..... | ..... | ..... | 78 | 38 | 116 | ..... | ..... | ..... |
| Iron and Steel Plates, Tanks, &c., | ..... | ..... | ..... | 11 | 13 | 24 | ..... | ..... | ..... |
| Iron, | $5 | $5 | $10 | ..... | ..... | ..... | 01 | 01 | 02 |
| Iron Foundry, | ..... | ..... | ..... | 25 | 30 | 55 | ..... | ..... | ..... |
| Boiler, Tube, Skelp Iron, Iron and Steel, | ..... | ..... | ..... | 59 | 52 | 111 | ..... | ..... | ..... |
| Iron and Steel, | ..... | ..... | ..... | 65 | 113 | 178 | ..... | ..... | ..... |
| Founders, Machinists and Car Builders, | ..... | ..... | ..... | 3 | 12 | 15 | ..... | ..... | ..... |
| Iron Works, | ..... | ..... | ..... | 34 | 83 | 117 | ..... | ..... | ..... |
| Boiler and Wrought Iron Works, | 67 | ..... | 54 | ..... | 13 | ..... | 15⅓ | ..... | 12¼ |
| Plate and Tube Iron, | ..... | ..... | ..... | 27 | 209 | 236 | ..... | ..... | ..... |
| Welded Iron Chains, &c., | ..... | ..... | ..... | 38 | 13 | 51 | ..... | ..... | ..... |
| Rolling Mill | ..... | ..... | ..... | 45 | 28 | 73 | ..... | ..... | ..... |
| Locomotives and Machinery, | ..... | ..... | ..... | 60 | 77 | 137 | ..... | ..... | ..... |
| Iron and Steel Plates, | ..... | ..... | ..... | 86 | ..... | 86 | ..... | ..... | ..... |
| Bessemer and Open Hearth Steel, | ..... | ..... | ..... | 29 | 37 | 66 | ..... | ..... | ..... |
| Horse and Mule Shoes, | ..... | ..... | ..... | 6 | 5 | 11 | ..... | ..... | ..... |
| Castings, | ..... | ..... | ..... | 20 | 79 | 99 | ..... | ..... | ..... |
| Zinc and Iron, | ..... | ..... | ..... | 15 | 15 | 30 | ..... | ..... | ..... |
| Iron and Brass Foundry, &c., | 25 | 45 | 70 | ..... | ..... | ..... | 06½ | 10¾ | 38 |
| Iron Founders, | ..... | ..... | ..... | 150 | 40 | 190 | ..... | ..... | ..... |
| Total | ..... | ..... | ..... | $25 | $57 | $82 | ..... | ..... | ..... |
| *Carpets.* | | | | | | | | | |
| Carpets, | ..... | ..... | ..... | $27 | $6 | $33 | ..... | ..... | ..... |
| Carpets, | ..... | ..... | ..... | 12 | 93 | 105 | ..... | ..... | ..... |
| Carpets, | ..... | $8 | ..... | 66 | ..... | 58 | ..... | 02¼ | ..... |
| Carpets, | $162 | 54 | $216 | ..... | ..... | ..... | 42 | 10 | 56¾ |

*facturing in Pennsylvania.*

| WAGES. | | | PRODUCT. | | | | | |
|---|---|---|---|---|---|---|---|---|
| Percentage of decrease per capita of wages paid. | | | Value of product. | | | Increase in value of production. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| 10 | 10⅛ | 19 | $824,000 | $788,000 | $335,000 | ..... | ..... | ..... |
| 08½ | 38⅓ | 43⅔ | 433,575 | 311,502 | 233,820 | ..... | ..... | ..... |
| 17⅔ | 17¾ | 32¼ | 86,133 | 72,389 | 41,600 | ..... | ..... | ..... |
| 02½ | 43½ | 45 | 1,029,398 | 1,150,684 | 930,224 | $121,286 | ..... | ..... |
| 16⅓ | 09½ | 24¼ | 1,743,180 | 936,875 | 386,679 | ..... | ..... | ..... |
| 02¼ | 02¾ | 05 | 1,345,361 | 985,181 | 784,903 | ..... | ..... | ..... |
| ..... | ..... | ..... | 68,800 | 46,500 | 31,600 | ..... | ..... | ..... |
| 03⅔ | 04⅔ | 08¼ | 73,000 | 65,000 | 64,000 | ..... | ..... | ..... |
| 10⅞ | 10⅔ | 20⅓ | 447,176 | 344,614 | 241,579 | ..... | ..... | ..... |
| 14⅓ | 29 | 39¼ | 305,223 | 226,772 | 114,521 | ..... | ..... | ..... |
| 08 | 03 | 03¾ | 107,250 | 95,835 | 81,500 | ..... | ..... | ..... |
| 06 | 14¾ | 19⅔ | 1,270,497 | 1,087,272 | 1,030,174 | ..... | ..... | ..... |
| ..... | 25¾ | ..... | 135,800 | 150,140 | 132,800 | 14,340 | ..... | ..... |
| 06⅛ | 51 | 05⅓ | 302,143 | 193,833 | 91,404 | ..... | ..... | ..... |
| 10⅓ | 04 | 14¼ | 125,000 | 80,000 | 60,000 | ..... | ..... | ..... |
| 09¾ | 06⅔ | 15¾ | 400,894 | 431,184 | 293,422 | 30,290 | ..... | ..... |
| 11½ | 16¾ | 26¼ | 807,000 | 880,731 | 307,987 | 73,731 | ..... | ..... |
| 19¾ | ..... | 19¾ | 705,000 | 475,000 | 345,000 | ..... | ..... | ..... |
| 06⅓ | 08½ | 14¼ | 7,358,536 | 6,644,652 | 4,908,268 | ..... | ..... | ..... |
| 01⅔ | 01⅓ | 03 | 200,920 | 228,700 | 260,140 | 27,780 | $31,440 | $59,220 |
| 04⅔ | 18¾ | 22⅓ | 90,000 | 80,000 | 50,000 | ..... | ..... | ..... |
| 03½ | 03⅔ | 07⅛ | 917,834 | 796,044 | 570,995 | ..... | ..... | ..... |
| ..... | ..... | ..... | 251,500 | 134,000 | 74,500 | ..... | ..... | ..... |
| 33⅓ | 13⅓ | 42¼ | 220,000 | 88,400 | 38,000 | ..... | ..... | ..... |
| .04⅝ | .11½ | 15⅛ | $219,981,303 | $189,097,192 | $146,523,793 | ..... | ..... | ..... |
| 06¼ | 01½ | 07½ | $375,000 | $275,000 | $220,000 | ..... | ..... | ..... |
| 02⅓ | 20⅓ | 22½ | 401,802 | 359,151 | 316,220 | ..... | ..... | ..... |
| 15½ | ..... | 13¾ | 231,595 | 163,386 | 188,940 | ..... | $25,554 | ..... |
| ..... | ..... | ..... | 350,000 | 300,000 | 200,000 | ..... | ..... | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Increase in average per capita of wages paid. | | | Decrease in average per capita of wages paid. | | | Percentage of increase per capita of wages paid. | | |
| | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| Carpets, | ..... | $2 | ..... | $38 | ..... | $36 | ..... | .006 | ..... |
| Carpets, | $79 | ..... | ..... | ..... | $190 | 111 | 20 | ..... | ..... |
| Carpets, | ..... | 14 | ..... | 92 | ..... | 78 | ..... | 04¾ | ..... |
| Carpets, | ..... | ..... | ..... | 21 | 21 | 42 | ..... | ..... | ..... |
| Carpets, | ..... | 93 | ..... | 131 | ..... | 33 | ..... | 24¼ | ..... |
| Carpets, | ..... | 8 | ..... | 194 | ..... | 186 | ..... | 02½ | ..... |
| Carpets, | ..... | 40 | ..... | 125 | ..... | 85 | ..... | 14¼ | ..... |
| Carpets, | ..... | 5 | ..... | 128 | ..... | 123 | ..... | 01¼ | ..... |
| Carpets, | ..... | 1 | ..... | 37 | ..... | 36 | ..... | .003 | ..... |
| Carpets,* | ..... | ..... | ..... | 59 | ..... | ..... | ..... | ..... | ..... |
| Carpets, | ..... | ..... | ..... | 114 | 12 | 126 | ..... | ..... | ..... |
| Carpets, | ..... | ..... | ..... | 29 | 39 | 68 | ..... | ..... | ..... |
| Carpets, | ..... | 8 | ..... | 65 | ..... | 57 | ..... | ..... | ..... |
| Carpets, | 18 | ..... | ..... | ..... | 55 | 37 | 05½ | ..... | ..... |
| Carpets,* | ..... | ..... | ..... | 20 | ..... | ..... | ..... | ..... | ..... |
| Carpets, | 69 | 58 | $127 | ..... | ..... | ..... | 11¾ | 09¾ | 21¾ |
| Carpets, | ..... | 46 | ..... | 195 | ..... | 149 | ..... | 13 | ..... |
| Carpets, | ..... | 71 | 48 | 23 | ..... | ..... | ..... | 21⅔ | 13⅔ |
| Carpets, | 25 | ..... | ..... | ..... | 71 | 46 | 16⅔ | ..... | ..... |
| Carpets, | ..... | ..... | ..... | 63 | 21 | 84 | ..... | ..... | ..... |
| Carpets, | ..... | 38 | ..... | 54 | ..... | 16 | ..... | 13⅔ | ..... |
| Carpets, | ..... | ..... | ..... | 25 | 23 | 48 | ..... | ..... | ..... |
| Total, | ..... | ..... | ..... | $57 | $15 | $72 | ..... | ..... | ..... |
| *Hosiery.* | | | | | | | | | |
| Hosiery,* | ..... | ..... | ..... | $31 | ..... | ..... | ..... | ..... | ..... |
| Hosiery, | ..... | ..... | ..... | 15 | $43 | $58 | ..... | ..... | ..... |
| Hosiery, | $5 | ..... | ..... | ..... | 18 | 13 | 02½ | ..... | ..... |
| Hosiery, | 45 | ..... | ..... | ..... | 125 | 80 | 15⅔ | ..... | ..... |

*Out of business in 1894.

*facturing in Pennsylvania.*

| WAGES. | | | PRODUCT. | | | | | |
|---|---|---|---|---|---|---|---|---|
| Percentage of decrease per capita of wages paid. | | | Value of product. | | | Increase in value of production. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| 10 | ..... | 09¾ | $216,000 | $145,000 | $151,000 | ..... | $6,000 | ..... |
| ..... | 40½ | 28⅔ | 650,000 | 475,000 | 342,844 | ..... | ..... | ..... |
| 22⅔ | ..... | 20¼ | 700,626 | 516,523 | 563,278 | ..... | 46,755 | ..... |
| 04½ | 04¾ | 09 | 41,756 | 37,778 | 37,670 | ..... | ..... | ..... |
| 24½ | ..... | 06⅛ | 599,907 | 394,822 | 515,125 | ..... | 120,303 | ..... |
| 37½ | ..... | 36 | 320,460 | 194,710 | 151,466 | ..... | ..... | ..... |
| 30¾ | ..... | 21 | 577,950 | 380,812 | 466,960 | ..... | 86,148 | ..... |
| 25½ | ..... | 24⅔ | 250,000 | 187,501 | 208,757 | ..... | 21,256 | ..... |
| 10¼ | ..... | 10 | 957,494 | 814,177 | 872,427 | ..... | 58,250 | ..... |
| 12 | ..... | ..... | 948,818 | 724,374 | ..... | ..... | ..... | ..... |
| 26⅓ | 03¾ | 29¼ | 351,100 | 300,602 | 258,866 | ..... | ..... | ..... |
| .06 | 08¾ | 10¼ | 553,682 | 402,512 | 361,760 | ..... | ..... | ..... |
| 16⅔ | 02⅓ | 15½ | 134,884 | 125,136 | 83,677 | ..... | ..... | ..... |
| ..... | 14½ | 11 | 84,342 | 84,177 | 41,790 | ..... | ..... | ..... |
| 04½ | ..... | ..... | 100,000 | 40,000 | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 135,000 | 85,562 | 81,496 | ..... | ..... | ..... |
| 35¾ | ..... | 27¾ | 468,675 | 458,176 | 451,691 | ..... | ..... | ..... |
| .06½ | ..... | ..... | 47,000 | 72,000 | 99,570 | $25,000 | 27,570 | $52,570 |
| ..... | 40½ | 30⅔ | 125,000 | 105,000 | 46,000 | ..... | ..... | ..... |
| 12½ | 04¾ | 16⅔ | 345,190 | 231,100 | 230,819 | ..... | ..... | ..... |
| 16½ | ..... | 04¾ | 117,967 | 99,287 | 93,120 | ..... | ..... | ..... |
| 11½ | 13 | 22 | 150,000 | 120,000 | 160,000 | ..... | 40,000 | 10,000 |
| 13¾ | 04¼ | 17⅜ | $9,234,048 | $7,082,066 | $6,143,576 | ..... | ..... | ..... |
| 11 | ..... | ..... | $300,000 | $265,000 | ..... | ..... | ..... | ..... |
| 07½ | 23½ | 28¾ | 155,370 | 101,544 | $121,260 | ..... | $19,716 | ..... |
| ..... | 09 | 06½ | 234,000 | 144,000 | 210,000 | ..... | 66,000 | ..... |
| ..... | 37½ | 28 | 50,000 | 35,000 | 46,000 | ..... | 11,000 | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Increase in average per capita of wages paid. | | | Decrease in average per capita of wages paid. | | | Percentage of increase per capita of wages paid. | | |
| | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| Hosiery, | ..... | ..... | ..... | $10 | $5 | $15 | ..... | ..... | ..... |
| Hosiery, | ..... | $15 | ..... | 84 | ..... | 69 | ..... | 04½ | ..... |
| Hosiery, | ..... | ..... | ..... | 9 | 26 | 35 | ..... | ..... | ..... |
| Hosiery, | $2 | ..... | ..... | ..... | 36 | 34 | 02½ | ..... | ..... |
| Hosiery, | ..... | ..... | ..... | 13 | 24 | 37 | ..... | ..... | ..... |
| Hosiery, | ..... | 93 | $39 | 54 | ..... | ..... | ..... | 46¾ | 19½ |
| Total | ..... | ..... | ..... | $8⅔ | $29¼ | $38 | ..... | ..... | ..... |
| *Wool.* | | | | | | | | | |
| Woolen Goods, | ..... | $35 | ..... | $45 | ..... | $10 | ..... | 13 | ..... |
| Woolen Goods, | $31 | ..... | $19 | ..... | $12 | ..... | .13 | ..... | 08½ |
| Woolen Goods, | ..... | 48 | 43 | 5 | ..... | ..... | ..... | 11⅛ | 12½ |
| Woolen Goods, | ..... | ..... | ..... | 37 | 20 | 57 | ..... | ..... | ..... |
| Woolen Goods, | ..... | 8 | ..... | 14 | ..... | 6 | ..... | 04 | ..... |
| Woolen Goods, | ..... | 17 | 12 | 5 | ..... | ..... | ..... | 04⅞ | 03⅓ |
| Woolen Goods, | ..... | 32 | ..... | 177 | ..... | 145 | ..... | 18 | ..... |
| Woolen Cloth, | ..... | 10 | ..... | 80 | ..... | 70 | ..... | 05⅔ | ..... |
| Woolen Goods, | ..... | 2 | ..... | 181 | ..... | 179 | ..... | 008 | ..... |
| Woolen Yarns, | ..... | 26 | ..... | 83 | ..... | 57 | ..... | 11½ | ..... |
| Worsted Yarns, | ..... | ..... | ..... | 33 | 231 | 264 | ..... | ..... | ..... |
| Worsted Goods, | ..... | 14 | ..... | 89 | ..... | 75 | ..... | 08 | ..... |
| Woolen Yarns, | ..... | 64 | ..... | 89 | ..... | 25 | ..... | 24¼ | ..... |
| Woolen Yarns, | 15 | ..... | 1 | ..... | 14 | ..... | .04 | ..... | .002 |
| Woolen Goods, | ..... | ..... | ..... | 102 | 46 | 148 | ..... | ..... | ..... |
| Woolen Yarns, | ..... | 62 | ..... | 79 | ..... | 17 | ..... | 32 | ..... |
| Woolen Goods, | ..... | 36 | 17 | 19 | ..... | ..... | ..... | 12½ | 05½ |
| Woolen Yarns, | 9 | ..... | ..... | ..... | 9 | ..... | 02⅔ | ..... | ..... |
| Woolen Yarns,* | ..... | ..... | ..... | 111 | 208 | 319 | ..... | ..... | ..... |
| Woolen Yarns, | ..... | 97 | ..... | 142 | ..... | 45 | ..... | 50½ | ..... |
| Woolen Yarns* | 67 | ..... | ..... | ..... | 400 | 333 | .20⅛ | ..... | ..... |

*Plant not in operation in 1894.

*facturing in Pennsylvania.*

| WAGES. | | | PRODUCT. | | | | | |
|---|---|---|---|---|---|---|---|---|
| Percentage of decrease per capita of wages paid. | | | Value of product. | | | Increase in value of production. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| 03⅓ | 01¾ | .05 | $77,294 | $63,397 | $73,655 | ..... | $10,258 | ..... |
| .21 | ..... | 17¼ | 53,000 | 37,000 | 31,000 | ..... | ..... | ..... |
| 02¼ | 09½ | 12¾ | 220,565 | 177,984 | 166,569 | ..... | ..... | ..... |
| ..... | 10⅔ | 10 | 564,000 | 470,000 | 483,000 | ..... | 13,000 | ..... |
| 10 | 20½ | 28½ | 16,568 | 25,343 | 33,219 | $8,775 | 7,876 | $16,651 |
| 33¾ | ..... | ..... | 110,000 | 30,000 | 62,297 | ..... | 32,297 | ..... |
| 03¼ | 11¾ | 17¼ | $1,780,797 | $1,340,268 | $1,227,000 | ..... | ..... | ..... |
| 14⅓ | ..... | 03⅓ | $699,725 | $523,835 | $557,930 | ..... | $34,095 | ..... |
| ..... | 04½ | ..... | 63,072 | 63,672 | 64,634 | $600 | 962 | $1,562 |
| .006 | ..... | ..... | 235,077 | 197,055 | 204,722 | ..... | 7,667 | ..... |
| .09⅓ | 05⅔ | 14⅔ | 281,403 | 219,249 | 106,092 | ..... | ..... | ..... |
| 06½ | ..... | 02⅔ | 1,250,000 | 330,000 | 603,000 | ..... | 273,000 | ..... |
| .01½ | ..... | ..... | 527,000 | 445,000 | 257,000 | ..... | ..... | ..... |
| .50 | ..... | 40 | 275,000 | 92,000 | 65,000 | ..... | ..... | ..... |
| .32 | ..... | 28 | 151,000 | 117,000 | 100,000 | ..... | ..... | ..... |
| .43½ | ..... | 43⅛ | 180,308 | 205,300 | 130,790 | 25,008 | ..... | ..... |
| .27 | ..... | 18½ | 288,000 | 295,000 | 325,000 | 7,000 | 30,000 | 37,000 |
| .06 | 44½ | 47¾ | 149,447 | 110,585 | 146,070 | ..... | 35,485 | ..... |
| .33½ | ..... | 28¼ | 174,000 | 71,500 | 89,000 | ..... | 17,500 | ..... |
| .22⅔ | ..... | 07 | 534,295 | 322,064 | 347,764 | ..... | 25,700 | ..... |
| ..... | 03⅔ | ..... | 241,190 | 151,445 | 103,732 | ..... | ..... | ..... |
| .23¾ | 14 | 34¼ | 396,000 | 297,000 | 310,000 | ..... | 13,000 | ..... |
| 28¾ | ..... | 06¼ | 105,300 | 66,460 | 20,715 | ..... | ..... | ..... |
| 06¼ | ..... | ..... | 251,611 | 195,843 | 159,350 | ..... | ..... | ..... |
| ..... | 02⅔ | ..... | 180,924 | 109,038 | 105,941 | ..... | ..... | ..... |
| 34⅔ | ..... | ..... | 398,933 | 198,268 | ..... | ..... | ..... | ..... |
| 42½ | ..... | 13⅙ | 110,000 | 140,000 | 190,000 | 30,000 | 50,000 | 80,000 |
| ..... | ..... | ..... | 400,000 | 150,000 | ..... | ..... | ..... | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Increase in average per capita of wages paid. | | | Decrease in average per capita of wages paid. | | | Percentage of increase per capita of wages paid. | | |
| | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| Worsted Yarns, | $9 | ..... | ..... | ..... | ..... | ..... | .04 | ..... | ..... |
| Worsted and Woolen Goods, | ..... | $22 | $7 | $15 | ..... | ..... | ..... | 05½ | 01½ |
| Woolen Goods, | ..... | ..... | ..... | 58 | $49 | $107 | ..... | ..... | ..... |
| Woolen Goods, | ..... | 16 | ..... | 253 | ..... | 237 | ..... | 05½ | ..... |
| Woolen Yarns, | 53 | ..... | 33 | ..... | 20 | ..... | 11¾ | ..... | ..... |
| Woolen and Worsted Goods, | ..... | ..... | ..... | 95 | 10 | 105 | ..... | ..... | ..... |
| Total | ..... | ..... | ..... | $45 | ..... | $45 | ..... | ..... | ..... |
| *Cotton.* | | | | | | | | | |
| Cotton Goods, | ..... | ..... | ..... | $4 | $31 | $35 | ..... | ..... | ..... |
| Cotton Goods, | ..... | $14 | ..... | 128 | ..... | 114 | ..... | 04 | ..... |
| Cotton Goods,* | ..... | ..... | ..... | 250 | ..... | ..... | ..... | ..... | ..... |
| Cotton Goods, | ..... | 35 | $1 | 289 | ..... | 254 | ..... | 16¼ | ..... |
| Cotton Goods, | $23 | ..... | 17 | ..... | 6 | ..... | 07⅓ | ..... | 05⅓ |
| Cotton Goods, | ..... | 124 | 41 | 83 | ..... | ..... | ..... | 42½ | 10⅞ |
| Cotton Damask, | ..... | ..... | ..... | 64 | 28 | 92 | ..... | ..... | ..... |
| Cotton Yarns, | ..... | ..... | ..... | 31 | 50 | 81 | ..... | ..... | ..... |
| Cotton Weaving, | ..... | ..... | ..... | 60 | 33 | 93 | ..... | ..... | ..... |
| Cotton Goods, | ..... | 123 | ..... | 260 | ..... | 137 | ..... | 47½ | ..... |
| Cotton Yarns, | ..... | ..... | ..... | 46 | 34 | 80 | ..... | ..... | ..... |
| Cotton Yarns, | ..... | ..... | ..... | 63 | 93 | 156 | ..... | ..... | ..... |
| Cotton Yarns, | ..... | 85 | ..... | 185 | ..... | 100 | ..... | 566 | ..... |
| Cotton Goods, | ..... | 30 | ..... | 50 | ..... | 20 | ..... | 12 | ..... |
| Cotton Goods, | 3 | ..... | ..... | ..... | 37 | 34 | 008¼ | ..... | ..... |
| Cotton Yarns, | ..... | 8 | ..... | 48 | ..... | 40 | ..... | 03½ | ..... |
| Cotton Goods | ..... | ..... | ..... | 20 | 63 | 83 | ..... | ..... | ..... |
| Cotton Goods, | 16 | ..... | ..... | ..... | 156 | 140 | 04 | ..... | ..... |
| Cotton Goods, | ..... | 67 | ..... | 167 | ..... | 100 | ..... | 40½ | ..... |
| Cotton Goods,* | ..... | ..... | ..... | 3 | ..... | ..... | ..... | ..... | ..... |

*Out of business in 1894.

*facturing in Pennsylvania.*

| WAGES. | | | PRODUCT. | | | | | |
|---|---|---|---|---|---|---|---|---|
| Percentage of decrease per capita of wages paid. | | | Value of product. | | | Increase in value of production. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| ..... | ..... | ..... | $704,305 | $352,658 | $330,595 | ..... | ..... | ..... |
| .03½ | ..... | ..... | 719,225 | 532,532 | 553,455 | ..... | $20,923 | ..... |
| .13½ | 13⅙ | 24¾ | 1,789,839 | 1,293,035 | 1,047,605 | ..... | ..... | ..... |
| .46½ | ..... | 43½ | 130,000 | 75,000 | 98,000 | ..... | 23,000 | ..... |
| ..... | 04 | 07⅓ | 264,704 | 217,734 | 127,401 | ..... | ..... | ..... |
| 23¼ | 03⅙ | 25½ | 763,676 | 859,413 | 610,521 | $95,[illegible] | ..... | ..... |
| 13 | ..... | 13 | $11,264,024 | $7,630,686 | $7,064,312 | ..... | ..... | ..... |
| 01⅓ | 13¾ | 15⅓ | $145,705 | $143,860 | $112,038 | ..... | ..... | ..... |
| 26¾ | ..... | 23¾ | 143,078 | 91,750 | 74,700 | ..... | ..... | ..... |
| 55½ | ..... | ..... | 50,000 | 12,000 | ..... | ..... | ..... | ..... |
| 57⅓ | ..... | 50⅓ | 180,000 | 80,000 | 91,000 | ..... | $11,000 | ..... |
| ..... | 01⅔ | ..... | 272,000 | 303,000 | 226,000 | $31,000 | ..... | ..... |
| 22⅓ | ..... | ..... | 250,000 | 160,000 | 165,000 | ..... | 5,000 | ..... |
| 16⅔ | 08¾ | 23⅞ | 144,000 | 31,000 | 47,000 | ..... | 16,019 | ..... |
| 08⅓ | 14⅞ | 21⅔ | 283,000 | 289,000 | 300,000 | 6,000 | 11,000 | $17,000 |
| 13⅓ | 08⅔ | 21¼ | 275,000 | 200,000 | 200,000 | ..... | ..... | ..... |
| .50 | ..... | 26⅓ | 520,000 | 224,000 | 280,000 | ..... | 56,000 | ..... |
| 10 | 08⅓ | 17¼ | 226,500 | 175,500 | 132,600 | ..... | ..... | ..... |
| 17 | 30¼ | 41¾ | 55,800 | 41,000 | 25,000 | ..... | ..... | ..... |
| 92½ | ..... | 500 | 175,600 | 12,000 | 80,000 | ..... | 68,000 | ..... |
| 16⅔ | ..... | 06⅔ | 150,000 | 125,000 | 168,000 | ..... | 43,000 | 18,000 |
| ..... | 10¼ | 09⅓ | 300,000 | 275,000 | 236,000 | ..... | ..... | ..... |
| 17¼ | ..... | 14⅓ | 163,940 | 75,840 | 79,618 | ..... | 3,778 | ..... |
| 07½ | 25 | 30⅔ | 357,800 | 252,500 | 181,493 | ..... | ..... | ..... |
| ..... | 39 | 35 | 100,000 | 95,000 | 40,000 | ..... | ..... | ..... |
| 50 | ..... | 50⅙ | 180,000 | 90,000 | 100,000 | ..... | 10,000 | ..... |
| .01 | ..... | ..... | 67,954 | 5,534 | ..... | ..... | ..... | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Increase in average per capita of wages paid. | | | Decrease in average per capita of wages paid. | | | Percentage of increase per capita of wages paid. | | |
| | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| Cotton Goods, | $1 | ..... | ..... | ..... | $115 | $114 | .003 | ..... | ..... |
| Total, | ..... | ..... | ..... | $68 | $27 | $95 | ..... | ..... | ..... |
| *Glass.* | | | | | | | | | |
| Glass-ware,* | ..... | ..... | ..... | $165 | $164 | $329 | ..... | ..... | ..... |
| Glass-ware, | ..... | ..... | ..... | 1 | 70 | 71 | ..... | ..... | ..... |
| Glass-ware, | ..... | ..... | ..... | 90 | 39 | 129 | ..... | ..... | ..... |
| Glass-ware,* | ..... | ..... | ..... | 156 | 249 | 405 | ..... | ..... | ..... |
| Glass-ware | ..... | $12 | $9 | 03 | ..... | ..... | ..... | 03⅔ | 02½ |
| Glass-ware,* | ..... | ..... | ..... | 192 | 192 | 389 | ..... | ..... | ..... |
| Glass-ware, | ..... | ..... | ..... | 77 | 14 | 91 | ..... | ..... | ..... |
| Glass-ware, | $28 | ..... | 20 | ..... | 8 | ..... | 06⅓ | ..... | 04¼ |
| Glass-ware, | ..... | 128 | 30 | 98 | ..... | ..... | ..... | 33¾ | 07⅞ |
| Glass-ware, | ..... | 45 | ..... | 70 | ..... | 25 | ..... | 13¾ | ..... |
| Plate Glass, | ..... | 85 | ..... | 198 | ..... | 113 | ..... | 19 | ..... |
| Window Glass, | ..... | 91 | ..... | 11 | ..... | 80 | ..... | 01¾ | ..... |
| Glass-ware | ..... | 153 | ..... | 144 | ..... | 9 | ..... | 37¾ | ..... |
| Bottles, | 181 | ..... | ..... | ..... | 242 | 63 | 109⅔ | ..... | ..... |
| Glass, | ..... | 31 | ..... | 54 | ..... | 23 | ..... | 05¾ | ..... |
| Glass, | 21 | ..... | 21 | ..... | ..... | ..... | 03½ | ..... | 03½ |
| Glass Bottles, | 9 | ..... | ..... | ..... | 129 | 120 | 01½ | ..... | ..... |
| Window Glass, | ..... | ..... | ..... | 329 | 244 | 573 | ..... | ..... | ..... |
| Glass-ware | 19 | 9 | 28 | ..... | ..... | ..... | 08⅔ | 03⅔ | 02¼ |
| Plate Glass, | ..... | 148 | 7 | 141 | ..... | ..... | ..... | 31¼ | 01½ |
| Total | ..... | $94 | ..... | $116 | ..... | $22 | ..... | 20¾ | ..... |
| *Fabrics.* | | | | | | | | | |
| Hosiery and Underwear, | ..... | ..... | ..... | $30 | $53 | $83 | ..... | ..... | ..... |
| Silk and Wool and Cotton and Wool, | ..... | $10 | ..... | 56 | ..... | 46 | ..... | 03¼ | ..... |

*Plant not in operation in 1894.

*facturing in Pennsylvania.*

| WAGES. | | | PRODUCT. | | | | | |
|---|---|---|---|---|---|---|---|---|
| Percentage of decrease per capita of wages paid. | | | Value of product. | | | Increase in value of production. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| ..... | 34⅔ | 34½ | $980,000 | $750,000 | $376,200 | ..... | ..... | ..... |
| 19 | 09¼ | 26½ | $5,020,377 | $3,477,034 | $2,908,518 | ..... | ..... | ..... |
| .50 | ..... | ..... | $241,116 | $60,880 | ..... | ..... | ..... | ..... |
| .002 | 19⅔ | 20 | 261,478 | 212,412 | $196,428 | ..... | ..... | ..... |
| 22⅓ | 10 | 32⅓ | 159,936 | 96,934 | 46,021 | ..... | ..... | ..... |
| 38½ | ..... | ..... | 154,335 | 95,442 | ..... | ..... | ..... | ..... |
| .008 | ..... | ..... | 221,542 | 208,909 | 134,136 | ..... | ..... | ..... |
| 49⅓ | ..... | ..... | 145,786 | 70,398 | ..... | ..... | ..... | ..... |
| 19 | 04⅓ | 22½ | 276,349 | 183,981 | 74,569 | ..... | ..... | ..... |
| ..... | 01¾ | ..... | 174,186 | 130,056 | 97,813 | ..... | ..... | ..... |
| 28 | ..... | ..... | 106,063 | 124,650 | 121,814 | $18,587 | ..... | $15,751 |
| 20 | ..... | 07¾ | 400,000 | 335,000 | 425,000 | ..... | $90,000 | 25,000 |
| 35⅓ | ..... | 20¼ | 660,155 | 388,800 | 390,598 | ..... | 1,798 | ..... |
| .02 | ..... | 12⅔ | 172,020 | 192,483 | 195,288 | 20,463 | 3,805 | 24,268 |
| 36⅓ | ..... | 02¼ | 252,493 | 222,387 | 136,699 | ..... | ..... | ..... |
| ..... | 70 | 38¼ | 39,596 | 62,335 | 14,512 | 22,739 | ..... | ..... |
| 09½ | ..... | 04 | 233,842 | 201,706 | 239,589 | ..... | 37,883 | 5,747 |
| ..... | ..... | ..... | 317,600 | 236,800 | 236,800 | ..... | ..... | ..... |
| ..... | 24 | 22⅓ | 207,700 | 185,185 | 92,597 | ..... | ..... | ..... |
| 34½ | 39 | 60 | 172,514 | 96,810 | 60,805 | ..... | ..... | ..... |
| ..... | ..... | ..... | 140,000 | 183,000 | 175,000 | 43,000 | ..... | 35,000 |
| 30¼ | ..... | ..... | 2,124,318 | 1,462,538 | 1,982,493 | ..... | 519,955 | ..... |
| 25½ | ..... | 05 | $6,461,029 | $4,750,706 | $4,620,212 | ..... | ..... | ..... |
| 10⅓ | 20½ | 29 | $750,000 | $675,000 | $550,000 | ..... | ..... | ..... |
| 15⅓ | ..... | 12⅔ | 511,422 | 450,269 | 226,213 | ..... | ..... | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Increase in average per capita of wages paid. | | | Decrease in average per capita of wages paid. | | | Percentage of increase per capita of wages paid. | | |
| | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| Chenille, Upholstery and Drapery, | ..... | $45 | $34 | $11 | ..... | ..... | ..... | 09⅓ | 06⅞ |
| Quilts, Lap Robes, &c., | $57 | ..... | ..... | ..... | $82 | $25 | 16 | ..... | ..... |
| Underwear, | 11 | ..... | 2 | ..... | 9 | ..... | 06 | ..... | 01 |
| Tapes, Webs and Narrow Fabrics, | ..... | ..... | ..... | 52 | 6 | 58 | ..... | ..... | ..... |
| Turkish Towels, Rugs, &c., | 7 | 7 | 14 | ..... | ..... | ..... | 02½ | 23⅓ | 05 |
| Lace, | ..... | ..... | ..... | 34 | 42 | 76 | ..... | ..... | ..... |
| Chenille Curtains, &c., | 24 | 44 | 68 | ..... | ..... | ..... | 05½ | 09¼ | 15 |
| Rugs, Lace Curtains, &c., | 47 | ..... | 34 | ..... | 13 | ..... | 13 | ..... | 09⅓ |
| Worsted and Spun Silk Yarns, | ..... | 11 | ..... | 30 | ..... | 19 | ..... | 04 | ..... |
| Chenille Curtains, Rugs, &c., | ..... | ..... | ..... | 26 | 12 | 38 | ..... | ..... | ..... |
| Plush, | 61 | ..... | 37 | ..... | 24 | ..... | 20 | ..... | 15⅛ |
| Cotton and Woolen Goods, | ..... | 6 | ..... | 39 | ..... | 33 | ..... | 02⅓ | ..... |
| Turkish Towels, &c., | ..... | 6 | ..... | 64 | ..... | 58 | ..... | 01¾ | ..... |
| Worsted and Woolen Goods, | 2 | 6 | 8 | ..... | ..... | ..... | 004 | 01⅓ | 01¾ |
| Cotton and Woolen Yarns, | 4 | 32 | 36 | ..... | ..... | ..... | 01 | 07⅓ | 08¼ |
| Hosiery and Hosiery Yarns, | 4 | 42 | 46 | ..... | ..... | ..... | 01¾ | 17 | 19 |
| Textile, | ..... | 109 | 26 | 83 | ..... | ..... | ..... | 32⅔ | 06¼ |
| Tickings and Stripes, | ..... | ..... | ..... | 121 | 47 | 168 | ..... | ..... | ..... |
| Knitting Mills, | 28 | ..... | 27 | ..... | 1 | ..... | 08¾ | ..... | 08½ |
| Plush, Table Covers, &c., | ..... | 15 | ..... | 76 | ..... | 61 | ..... | 04⅛ | ..... |
| Hosiery, &c., | 6 | ..... | ..... | ..... | 26 | 20 | 03 | ..... | ..... |
| Wood working Machinery, | ..... | 16 | ..... | 88 | ..... | 72 | ..... | 04¼ | ..... |
| Textile, | ..... | ..... | ..... | 71 | 112 | 183 | ..... | ..... | ..... |
| Wood working Machinery, | ..... | 12 | ..... | 38 | ..... | 26 | ..... | 02¾ | ..... |
| Cotton and Woolen Yarns, | 18 | ..... | 13 | ..... | 5 | ..... | 06⅛ | ..... | 04½ |
| Cotton Goods, | ..... | 1 | 1 | ..... | ..... | ..... | ..... | 002⅓ | 002⅓ |
| Cotton and Woolen Goods, | ..... | ..... | ..... | 40 | 25 | 65 | ..... | ..... | ..... |
| Cotton Carpet Yarn, | 9 | ..... | ..... | ..... | 121 | 112 | 02⅔ | ..... | ..... |
| Dress and Cloak Trimmings, | ..... | ..... | ..... | 68 | 75 | 143 | ..... | ..... | ..... |
| Cotton and Woolen Goods, | 71 | 26 | 97 | ..... | ..... | ..... | 17½ | 05½ | 24 |
| Rubber Boots and Shoes, | ..... | ..... | ..... | 21 | 49 | 70 | ..... | ..... | ..... |
| Carpet Yarns | ..... | 78 | ..... | 124 | ..... | 46 | ..... | 24⅔ | ..... |

*facturing in Pennsylvania.*

| WAGES. | | | PRODUCT. | | | | | |
|---|---|---|---|---|---|---|---|---|
| Percentage of decrease per capita of wages paid. | | | Value of product. | | | Increase in value of production. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| 02¼ | ..... | ..... | $796,500 | $613,600 | $648,590 | ..... | $34,990 | ..... |
| ..... | 20 | 07⅛ | 286,000 | 227,000 | 142,000 | ..... | ..... | ..... |
| ..... | 04⅔ | ..... | 400,000 | 395,000 | 233,000 | ..... | ..... | ..... |
| 15 | 02 | 17 | 200,000 | 150,000 | 165,000 | ..... | 15,000 | ..... |
| ..... | ..... | ..... | 249,876 | 233,165 | 202,591 | ..... | ..... | ..... |
| 11 | 15½ | 24¾ | 545,257 | 320,902 | 612,576 | ..... | 291,674 | $67,319 |
| ..... | ..... | ..... | 908,552 | 437,491 | 541,192 | ..... | 103.701 | ..... |
| ..... | 03⅛ | ..... | 769,192 | 740,405 | 549,472 | ..... | ..... | ..... |
| 09⅓ | ..... | 06⅛ | 123,216 | 102,880 | 115,750 | ..... | 12,870 | ..... |
| 09¼ | 05 | 13½ | 351,518 | 259,349 | 238,448 | ..... | ..... | ..... |
| ..... | 08 | ..... | 61,073 | 60,992 | 33,776 | ..... | ..... | ..... |
| 13 | ..... | 11⅛ | 15,073 | 12,601 | 14,210 | ..... | 1,609 | ..... |
| 16⅓ | ..... | 15 | 47,000 | 36,000 | 50,000 | ..... | 14,000 | 3,000 |
| ..... | ..... | ..... | 263,346 | 233,788 | 223,492 | ..... | ..... | ..... |
| ..... | ..... | ..... | 26,388 | 25,309 | 21,995 | ..... | ..... | ..... |
| ..... | ..... | ..... | 71,613 | 55,572 | 62,650 | ..... | 7,078 | ..... |
| 20 | ..... | ..... | 17,925 | 14,051 | 31,000 | ..... | 16,949 | 13,075 |
| 28⅔ | 15⅓ | 39⅓ | 66,141 | 45,746 | 52,910 | ..... | 7,164 | ..... |
| ..... | 003 | ..... | 369,924 | 404,439 | 399,658 | $34,515 | ..... | 29,734 |
| 17 | ..... | 13½ | 44,967 | 29,834 | 31,082 | ..... | 1,248 | ..... |
| ..... | 12⅓ | 10 | 26,876 | 30,831 | 21,429 | 3,955 | ..... | ..... |
| 19 | ..... | 15½ | 116,978 | 92,962 | 69,830 | ..... | ..... | ..... |
| 17⅔ | 32 | 43⅓ | 61,157 | 47,403 | 35,576 | ..... | ..... | ..... |
| 08 | ..... | 05½ | 148,300 | 119,598 | 119,953 | ..... | 355 | ..... |
| ..... | 01½ | ..... | 66,392 | 48,548 | 35,034 | ..... | ..... | ..... |
| ..... | ..... | ..... | 50,000 | 25,000 | 25,000 | ..... | ..... | ..... |
| 13¾ | 10 | 22½ | 300,000 | 175,000 | 140,000 | ..... | ..... | ..... |
| ..... | 34⅓ | 32⅔ | 117,917 | 99,266 | 59,283 | ..... | ..... | ..... |
| 15⅓ | 20 | 32¼ | 542,000 | 250,000 | 200,000 | ..... | ..... | ..... |
| ..... | ..... | ..... | 61,250 | 45,750 | 52,560 | ..... | 6,810 | ..... |
| 05 | 11¾ | 16 | 749,236 | 845,689 | 711,056 | 96,453 | ..... | ..... |
| 28 | ..... | 10½ | 128,250 | 65,835 | 70,000 | ..... | 4,165 | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Increase in average per capita of wages paid. | | | Decrease in average per capita of wages paid. | | | Percentage of increase per capita of wages paid. | | |
| Character of Industry. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| Carpet Yarns, | ..... | ..... | ..... | $112 | ..... | $112 | ..... | ..... | ..... |
| Cotton and Woolen Goods, | ..... | ..... | ..... | 85 | $49 | 134 | ..... | ..... | ..... |
| Cotton and Woolen Cloths, | ..... | ..... | ..... | 7 | 59 | 66 | ..... | ..... | ..... |
| Cotton and Woolen Goods, | ..... | ..... | ..... | 30 | 74 | 104 | ..... | ..... | ..... |
| Cotton Jeans, | ..... | $9 | ..... | 40 | ..... | 31 | ..... | 04 | ..... |
| Carpets and Upholstery Fabrics, | ..... | ..... | ..... | 24 | 73 | 97 | ..... | ..... | ..... |
| Woolen and Worsted Yarns, | $59 | ..... | ..... | ..... | 123 | 64 | 23½ | ..... | ..... |
| Cotton and Woolen Goods, | 13 | ..... | ..... | ..... | 18 | 5 | 04⅓ | ..... | ..... |
| Cotton and Woolen Cloth, | ..... | ..... | ..... | 32 | 66 | 98 | ..... | ..... | ..... |
| Cotton and Woolen Yarn, | ..... | ..... | ..... | 39 | 38 | 77 | ..... | ..... | ..... |
| Knit Goods, | ..... | ..... | ..... | 42 | 58 | 100 | ..... | ..... | ..... |
| Cotton, Woolen and Merino Yarns, | ..... | 139 | $14 | 125 | ..... | ..... | ..... | 72⅞ | 04½ |
| Hosiery and Knit Goods, | ..... | 34 | 26 | 8 | ..... | ..... | ..... | 12⅞ | 09½ |
| Woolen and Merino Yarns, | ..... | ..... | ..... | 78 | ..... | 78 | ..... | ..... | ..... |
| Worsted Goods, | ..... | 25 | ..... | 33 | ..... | 8 | ..... | 08⅓ | ..... |
| Underwear | ..... | ..... | ..... | 33 | 144 | 177 | ..... | ..... | ..... |
| Cheviots, &c., | ..... | ..... | ..... | 88 | 13 | 101 | ..... | ..... | ..... |
| Cotton and Worsted Goods, | 63 | ..... | 37 | ..... | 26 | ..... | 17 | ..... | 10 |
| Table Covers, &c., | ..... | ..... | ..... | 3 | 8 | 11 | ..... | ..... | ..... |
| Cotton, Merino and Worsted Goods, | 2 | 45 | 47 | ..... | ..... | ..... | 008½ | 18⅞ | 02 |
| Carpet and Rug Yarns, | ..... | ..... | ..... | 43 | ..... | 43 | ..... | ..... | ..... |
| Cotton and Woolen Goods,* | ..... | ..... | ..... | 55 | 345 | 400 | ..... | ..... | ..... |
| Chenille Goods, | ..... | ..... | ..... | 74 | 79 | 153 | ..... | ..... | ..... |
| Knit Underwear, | ..... | ..... | ..... | 11 | 20 | 31 | ..... | ..... | ..... |
| Knit Goods | ..... | 8 | ..... | 47 | ..... | 39 | ..... | 03 | ..... |
| Hosiery and Underwear, | ..... | 20 | ..... | 138 | ..... | 118 | ..... | 07⅓ | ..... |
| Dress Trimmings, | ..... | 77 | 38 | 39 | ..... | ..... | ..... | 42⅞ | 17⅓ |
| Chenille Curtains, | ..... | ..... | ..... | 93 | 68 | 161 | ..... | ..... | ..... |
| Wool Shoddies,* | ..... | ..... | ..... | 27 | 356 | 383 | ..... | ..... | ..... |
| Carpet and Carpet Yarn, | 7 | 73 | 89 | ..... | ..... | ..... | 2⅓ | 23⅞ | 30 |
| Table Covers and Mohair Plushes, | ..... | ..... | ..... | 34 | 14 | 48 | ..... | ..... | ..... |

*Plant not operated in 1894.

*facturing in Pennsylvania.*

| WAGES. | | | PRODUCT. | | | | | |
|---|---|---|---|---|---|---|---|---|
| Percentage of decrease per capita of wages paid. | | | Value of product. | | | Increase in value of production. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| 36 | ..... | 36 | $148,750 | $100,000 | $100,000 | ..... | ..... | ..... |
| 20½ | 15 | 32⅜ | 464,114 | 382,387 | 280,550 | ..... | ..... | ..... |
| 02⅓ | 11 | 21½ | 177,639 | 118,780 | 88,641 | ..... | ..... | ..... |
| 09⅓ | 25½ | 32⅓ | 215,000 | 185,000 | 142,800 | ..... | ..... | ..... |
| 17⅓ | ..... | 11½ | 120,000 | 93,000 | 103,000 | ..... | $10,000 | ..... |
| 06⅔ | 22 | 27 | 285,000 | 200,000 | 175,000 | ..... | ..... | ..... |
| ..... | 40 | 25½ | 1,260,000 | 970,000 | 668,000 | ..... | ..... | .... |
| ..... | 05⅔ | 01⅔ | 156,150 | 79,398 | 80,760 | ..... | 1,362 | ..... |
| 07½ | 17 | 23½ | 96,040 | 81,920 | 93,182 | ..... | 11,262 | ..... |
| 12¼ | 13½ | 24 | 117,032 | 73,800 | 60,000 | ..... | ..... | ..... |
| 11⅛ | 17⅓ | 26¾ | 177,000 | 145,000 | 150,000 | ..... | 5,000 | ..... |
| 40 | ..... | ..... | 83,000 | 60,000 | 37,000 | ..... | ..... | ..... |
| 03 | ..... | ..... | 216,935 | 189,459 | 175,000 | ..... | ..... | ..... |
| 25¼ | ..... | 25¼ | 142,250 | 96,123 | 49,631 | ..... | ..... | ..... |
| 10 | ..... | 02¼ | 500,000 | 150,000 | 300,000 | ..... | 150,000 | ..... |
| 09¾ | 47⅓ | 52½ | 199,481 | 184,063 | 144,524 | ..... | ..... | ..... |
| 18 | 03¼ | 20¾ | 87,620 | 37,935 | 46,218 | ..... | 8,283 | ..... |
| ..... | 06 | ..... | 327,404 | 285,045 | 222,701 | ..... | ..... | ..... |
| 007 | 02 | 02⅔ | 118,818 | 91,100 | 93,200 | ..... | 2,100 | ..... |
| ..... | ..... | ..... | 135,977 | 85,481 | 93,871 | ..... | 8,390 | ..... |
| 10 | ..... | 10 | 367,037 | 246,930 | 203,013 | ..... | ..... | ..... |
| 14 | ..... | ..... | 180,225 | 118,200 | ..... | ..... | ..... | ..... |
| 17¼ | 26 | 36 | 124,425 | 76,897 | 71,261 | ..... | ..... | ..... |
| 03 | 06 | 08¾ | 318,779 | 149,914 | 113,377 | ..... | ..... | ..... |
| 14⅔ | ..... | 12⅛ | 188,753 | 213,776 | 171,452 | $25,023 | ..... | ..... |
| 33½ | ..... | 28¾ | 162,068 | 145,406 | 103,152 | ..... | ..... | ..... |
| 18 | ..... | ..... | 420,000 | 205,000 | 141,000 | ..... | ..... | ..... |
| 22½ | 21¼ | 39¾ | 100,000 | 120,000 | 140,259 | 20,000 | 20,259 | $40,259 |
| 07 | ..... | ..... | 163,317 | 127,063 | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | 1,134,500 | 514,000 | 525,000 | ..... | ..... | ..... |
| 10⅞ | 05⅛ | 15½ | 177,191 | 103,605 | 46,830 | ..... | 11,000 | ..... |

*Statistics Relating to Manu-*

| INDUSTRIES. | WAGES. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Increase in average per capita of wages paid. | | | Decrease in average per capita of wages paid. | | | Percentage of increase per capita of wages paid. | | |
| | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| Yarns, | ..... | ..... | ..... | $84 | $132 | $216 | ..... | ..... | ..... |
| Cotton, Woolen and Mixed Goods, | ..... | $50 | $10 | 40 | ..... | ..... | ..... | 20 | 04 |
| Cotton and Woolen Goods, | ..... | ..... | ..... | 35 | 49 | 84 | ..... | ..... | ..... |
| Silk Throwing and Silk Weaving, | $10 | ..... | ..... | ..... | 23 | 13 | 3⅔ | ..... | ..... |
| Textile Fabrics, | ..... | ..... | ..... | 37 | 46 | 83 | ..... | ..... | ..... |
| Hosiery Yarn | ..... | 34 | ..... | 52 | ..... | 18 | ..... | 10½ | ..... |
| Organs and Pianos, | ..... | ..... | ..... | 34 | 27 | 61 | ..... | ..... | ..... |
| Blankets, Yarns, &c., | ..... | ..... | ..... | 38 | 36 | 74 | ..... | ..... | ..... |
| Cabinet Organs, | ..... | ..... | ..... | 1 | 27 | 28 | ..... | ..... | ..... |
| Caramels, | 10 | 8 | 18 | ..... | ..... | ..... | 05 | 04 | 09½ |
| Silk Throwing (on commission), | ..... | 106 | 89 | 17 | ..... | ..... | ..... | 74 | 50⅝ |
| Broad and Thrown Silks, | ..... | 364 | 294 | 70 | ..... | ..... | ..... | 227½ | 125⅝ |
| Electric Light Carbons, | 19 | ..... | ..... | ..... | 158 | 139 | 03½ | ..... | ..... |
| Sewing Machines, &c., | ..... | ..... | ..... | 45 | 328 | 373 | ..... | ..... | ..... |
| Silk Throwing, | ..... | 110 | 97 | 13 | ..... | ..... | ..... | 60⅞ | 50 |
| Ribbons, | ..... | 17 | ..... | 68 | ..... | 51 | ..... | 06¼ | ..... |
| Silk Throwing, | ..... | 8 | 2 | 6 | ..... | ..... | ..... | 04⅞ | 01⅛ |
| Silk Spinning and Weaving, | 12 | 22 | 34 | ..... | ..... | ..... | 05 | 08⅞ | 14¼ |
| Parlor Matches, | ..... | 9 | 7 | 2 | ..... | ..... | ..... | 05 | 03¾ |
| Heating Apparatus, | 8 | ..... | ..... | ..... | 35 | 27 | 02 | ..... | ..... |
| Ornamental Iron Work, | 32 | ..... | 12 | ..... | 20 | ..... | 07¼ | ..... | 02¾ |
| Agricultural Implements, | ..... | 47 | 47 | ..... | ..... | ..... | ..... | 11 | 11 |
| Water Wheels, | 12 | ..... | ..... | ..... | 48 | 36 | 02⅓ | ..... | ..... |
| Agricultural Implements, &c., | ..... | 3 | ..... | 43 | ..... | 40 | ..... | 008¾ | ..... |
| Cotton and Woolen Goods, | ..... | 85 | 29 | 56 | ..... | ..... | ..... | 29⅛ | 08⅓ |
| Carpet Yarn, | ..... | ..... | ..... | 60 | ..... | 60 | ..... | ..... | ..... |
| Calico Printing, | ..... | 41 | 31 | 10 | ..... | ..... | ..... | 09¼ | 06⅞ |
| Cotton and Woolen Goods, | ..... | ..... | ..... | 153 | 10 | 163 | ..... | ..... | ..... |
| Cotton and Woolen Goods, | ..... | 94 | ..... | 45 | ..... | 51 | ..... | 40 | ..... |
| Silk Plushes, | ..... | ..... | ..... | 26 | 29 | 55 | ..... | ..... | ..... |
| Silk, | ..... | 16 | 16 | ..... | ..... | ..... | ..... | 07⅜ | 07⅜ |
| Total, | ..... | ..... | ..... | $18 | $6 | $24 | ..... | ..... | ..... |

*facturing in Pennsylvania.*

| WAGES. | | | PRODUCT. | | | | | |
|---|---|---|---|---|---|---|---|---|
| Percentage of decrease per capita of wages paid. | | | Value of product. | | | Increase in value of production. | | |
| 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1892. | 1893. | 1894. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. |
| 21¼ | 42⅓ | 54⅔ | $34,495 | $25,849 | $15,515 | ..... | ..... | ..... |
| 15⅞ | ..... | ..... | 122,406 | 76,160 | 84,750 | ..... | $8,590 | ..... |
| 11⅔ | 19 | 21 | 235,000 | 196,000 | 60,000 | ..... | ..... | ..... |
| ..... | 09 | 05¼ | 181,427 | 197,845 | 218,394 | $16,418 | 20,549 | $36,967 |
| 08⅝ | 12 | 19½ | 323,571 | 210,328 | 222,725 | ..... | 12,397 | ..... |
| 16 | ..... | 05½ | 72,090 | 56,741 | 61,273 | ..... | 4 532 | ..... .... |
| 11¾ | 10½ | 21⅛ | 121,500 | 102,109 | 82,863 | ..... | ..... | ..... ..... |
| 11¾ | 12⅓ | 22⅓ | 1,907,761 | 1,609,007 | 1,196,301 | ..... | ..... | ..... |
| 001½ | 06⅔ | 07 | 75,054 | 68,860 | 56,956 | ..... | ..... | ..... |
| ..... | ..... | ..... | 400,000 | 333,333 | 304,000 | ..... | ..... | ..... |
| 10⅜ | ..... | ..... | 422,000 | 227,500 | 225,000 | ..... | ..... | ..... |
| 30 | ..... | ..... | 2,574,000 | 624,000 | 1,600,000 | ..... | 976,000 | ..... ..... |
| ..... | 29¼ | 26⅔ | 59,000 | 70,000 | 85,000 | 11,000 | 15,000 | 26,000 |
| 08⅓ | 68¼ | 71 | 176,387 | 133,426 | 94,654 | ..... | ..... | ..... . .... |
| 07 | ..... | ..... | 14,673 | 12,978 | 14,671 | ..... | 1,693 | ..... |
| 20 | ..... | 14⅞ | 131,400 | 138,571 | 169,748 | 7,171 | 31,177 | 38,348 |
| 08 | ..... | ..... | 49,800 | 55,260 | 72,435 | 5,460 | 17,175 | 22,635 |
| ..... | ..... | ..... | 611,517 | 413,218 | 448,108 | ..... | 34,890 | ..... |
| 01½ | ..... | ..... | 178,560 | 153,524 | 110,637 | ..... | ..... | ..... |
| ..... | 08⅞ | 07 | 76,759 | 59,588 | 68,700 | ..... | 9,112 | ..... |
| ..... | 04¼ | ..... | 130,000 | 110,000 | 115,000 | ..... | 5,000 | ..... |
| ..... | ..... | ..... | 16,462 | 20,150 | 19,392 | 3,188 | ..... | 2,930 |
| ..... | 11⅛ | 08⅔ | 132,000 | 180,000 | 120,000 | 48,000 | ..... | ..... |
| 11⅛ | ..... | 10¼ | 634,283 | 538,043 | 510,136 | ..... | ..... | ..... |
| 16⅛ | ..... | ..... | 217,000 | 180,000 | 161,403 | ..... | ..... | ..... |
| 12½ | ..... | 12½ | 165,000 | 110,000 | 110,000 | ..... | ..... | ..... |
| 92½ | ..... | ..... | 5,000,000 | 4,000,000 | 4,700,000 | ..... | 700,000 | ..... |
| 40 | 04⅓ | 42⅔ | 153,000 | 65,000 | 28,000 | ..... | ..... | ..... |
| 12⅔ | ..... | 13⅓ | 113,748 | 134,325 | 137,117 | 20,577 | 2,792 | 23,369 |
| 06 | 07 | 12½ | 124,436 | 131,974 | 157,178 | 7,438 | 25,204 | 32,742 |
| ..... | ..... | ..... | 600,000 | 300,000 | 450,000 | ..... | 150,000 | ..... |
| 05½ | 02 | 07¼ | $32,661,173 | $23,532,346 | $23,004,704 | ..... | ..... | ..... |

*Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1895 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| *Iron.* | | | | | | | | | |
| Bolts, Nuts, Bar Iron, &c., | $158,100 | $110,519 | $268,619 | ..... | ..... | ..... | 15⅓ | 12⅔ | 26 |
| Builders' Hardware, | 100,000 | 75,000 | 175,000 | ..... | ..... | ..... | 25 | 25 | 43¾ |
| Boilers, Heaters, &c.,* | ..... | 50,000 | 45,000 | 11⅛ | ..... | ..... | ..... | ..... | ..... |
| Skelp Iron, | 225,745 | 172,984 | 398,729 | ..... | ..... | ..... | 29⅓ | 31¾ | 51¾ |
| Hardware and Tacks, | 14,282 | 28,304 | 42 586 | ..... | ..... | ..... | 16⅓ | 39½ | 49½ |
| Steel and Iron Structural Material, | 371,211 | 226,335 | 597,546 | ..... | ..... | ..... | 42½ | 43⅛ | 66¾ |
| Cars, Engines, Frogs, Switches, &c., | 184,460 | 113,253 | 297,713 | ..... | ..... | ..... | 29 | 25¼ | 47 |
| Stoves, Heaters, &c., | 29,000 | 28,000 | 57,000 | ..... | ..... | ..... | 18⅓ | 21¾ | 36 |
| Builders' Hardware, | 15,004 | 84,623 | 99,627 | ..... | ..... | ..... | 02¾ | 15¾ | 18⅛ |
| Foundry and Machine Works, | 17,019 | 117,283 | 134,302 | ..... | ..... | ..... | 05 | 37⅛ | 40⅓ |
| Engines, Saw Mills, Separators, &c., | 102,830 | 128,700 | 231,530 | ..... | ..... | ..... | 11½ | 16⅔ | 26⅓ |
| Ice Making Machinery, Engines, &c., | 275,109 | 193,475 | 468,584 | ..... | ..... | ..... | 33½ | 35½ | 57⅛ |
| Engine and Repair Works, | 14,580 | 11,450 | 26,030 | ..... | ..... | ..... | 21⅔ | 21¾ | 38¾ |
| Foundry and Machine Works, | 272,349 | ..... | 150,469 | ..... | 211⅛ | ..... | 82¼ | ..... | 45½ |
| Iron and Steel Plates and Bars, | 557,448 | 513,105 | 1,070,553 | ..... | ..... | ..... | 42⅓ | 68 | 81⅔ |
| Pig Iron,* | 142,661 | 291,467 | 434,128 | ..... | ..... | ..... | 32¾ | ..... | ..... |
| Pig Iron, &c., | 97,781 | 410,744 | 508,525 | ..... | ..... | ..... | 15⅓ | 76¾ | 80½ |
| Rolling Mill,* | 199,262 | 231,264 | 30,526 | ..... | ..... | ..... | 46 | ..... | ..... |
| Blast Furnace, | 25,843 | 138,739 | 164,582 | ..... | ..... | ..... | 11⅓ | 66½ | 70⅓ |
| Boilers and Engines, | 55,000 | 30,000 | 85,000 | ..... | ..... | ..... | 30⅔ | 24 | 47¼ |
| Blast Furnace, | 138,459 | 90,307 | 278,766 | ..... | ..... | ..... | 35⅓ | 26¼ | 52½ |
| Blast Furnace, | ..... | 116,248 | 91,340 | 11 | ..... | ..... | ..... | 47 | 40⅞ |

*Plant not in operation in 1894.

## *Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Blast Furnace, | $129,554 | $27,410 | $156,964 | ..... | ..... | ..... | 22½ | 06⅛ | 27½ |
| Skelp Iron,* | ..... | 428,000 | 418,000 | 02⅓ | ..... | ..... | ..... | ..... | ..... |
| Bolts, Nuts and Washers, | ..... | 52,693 | 38,737 | 11½ | ..... | ..... | ..... | 39 | 31½ |
| Cars, Car Wheels, Castings, &c., | 80,000 | 103,000 | 183,000 | ..... | ..... | ..... | 13⅔ | 20 | 30½ |
| Janney Car Coupler, | 445,850 | 498,553 | 944,403 | ..... | ..... | ..... | 30½ | 49½ | 65 |
| Springs, | 434,467 | 373,744 | 808,211 | ..... | ..... | ..... | 38 | 53 | 71 |
| Brass and Copper Tubes, | ..... | ..... | ..... | 13⅜ | 41 | 60 | ..... | ..... | ..... |
| Bar Iron, | 57,617 | 113,306 | 170,923 | ..... | ..... | ..... | 16⅔ | 39⅓ | 49½ |
| Bar Iron, | 110,600 | 152,290 | 262,890 | ..... | ..... | ..... | 27½ | 52⅓ | 65½ |
| Stoves, | 10,154 | 35,610 | 45,764 | ..... | ..... | ..... | 08¼ | 31⅔ | 37½ |
| Stoves, Furnaces and Ranges, | 30,754 | 35,511 | 66,265 | ..... | ..... | ..... | 13½ | 18 | 29 |
| Pig Iron,* | 191,446 | 147,179 | 338,625 | ..... | ..... | ..... | 56½ | ..... | ..... |
| Bridges, Buildings, &c., | 12,252 | 70,432 | 82,684 | ..... | ..... | ..... | 02 | 12⅔ | 14½ |
| Bridges, &c., | ..... | 40,000 | ..... | 45¼ | ..... | 26¼ | ..... | 13 | ..... |
| Structural Work, | 117,229 | 153,630 | 270,859 | ..... | ..... | ..... | 24½ | 42½ | 56¾ |
| Iron and Steel Construction, | 681,251 | 336,219 | 1,017,470 | ..... | ..... | ..... | 41 | 34 | 60¾ |
| Iron Foundry and Construction, | 14,973 | 162,364 | 177,337 | ..... | ..... | ..... | 05 | 57 | 59 |
| Light Locomotives, | 68,000 | 97,000 | 165,000 | ..... | ..... | ..... | 16 | 27½ | 39 |
| Boiler, Tank and Plate Iron Works, | 19,145 | 10,498 | 29,643 | ..... | ..... | ..... | 15 | 09¾ | 23½ |
| Sheet Iron, Sheet Steel, &c., | 40,000 | ..... | 25,000 | ..... | 06⅜ | ..... | 14½ | ..... | 09¾ |
| Iron and Steel Sheets, | 241,201 | 229,130 | 470,331 | ..... | ..... | ..... | 15¼ | 17 | 29⅔ |
| Sheet Iron and Sheet Steel, | 150,000 | 34,952 | 184,952 | ..... | ..... | ..... | 21 | 6¼ | 26⅓ |
| Merchant Bar Iron, Steel, &c., | 317,660 | 300,143 | 617,803 | ..... | ..... | ..... | 31½ | 43½ | 61⅓ |

*Plant not in operation in 1894.

*Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Iron and Steel Rolling Mills, | $301,350 | $79,463 | $380,813 | ..... | ..... | ..... | 37 | 16⅛ | 48 |
| Iron and Steel Work, | 1,346,193 | 995,423 | 2,341,616 | ..... | ..... | ..... | 16½ | 14¾ | 29 |
| Bar Iron, Nails and Pig Iron, | 231,457 | 83,116 | 324,573 | ..... | ..... | ..... | 42 | 26 | 58¾ |
| Bar Steel, Railroad and Boat Spikes, | 577,218 | 174,895 | 752,113 | ..... | ..... | ..... | 39 | 19⅛ | 50½ |
| Malleable Iron Foundry, | 25,000 | ..... | 23,000 | ..... | 01½ | ..... | 15½ | ..... | 14⅓ |
| Wrought Iron Pipe, | 221,700 | ..... | 191,329 | ..... | 03⅛ | ..... | 19 | ..... | 16 |
| Sheet Iron, | 141,186 | 205,104 | 346,290 | ..... | ..... | ..... | 07⅛ | 14¼ | 21¾ |
| Sheet Iron and Sheet Steel, | 33,784 | 30,285 | 64,069 | ..... | ..... | ..... | 10½ | 10½ | 19¾ |
| Sheet Iron and Sheet Steel, | 99,000 | 27,302 | 126,302 | ..... | ..... | ..... | 24¼ | 08¾ | 30¾ |
| Steel, | 267,457 | 93,966 | 361,423 | ..... | ..... | ..... | 26 | 12½ | 35½ |
| Steel, | 492,000 | 286,691 | 778,691 | ..... | ..... | ..... | 30 | 25⅞ | 48⅔ |
| Steel Works, | 254,313 | 122,277 | 376,590 | ..... | ..... | ..... | 21⅓ | 13 | 31½ |
| Iron and Steel Works, | 807,562 | 241,581 | 1,049,143 | ..... | ..... | ..... | 70½ | 71½ | 91½ |
| Crucibles, | 41,750 | 10,790 | 52,540 | ..... | ..... | ..... | 25 | 08½ | 32⅓ |
| Iron, Steel, Hardware, &c., | 1,263,119 | 918,842 | 2,181,961 | ..... | ..... | ..... | 34 | 38⅜ | 59⅔ |
| Crucibles and Open Hearth Steel, | 277,591 | 195,719 | 473,310 | ..... | ..... | ..... | 27 | 25¾ | 45⅔ |
| Iron, | 205,791 | 135,492 | 341,283 | ..... | ..... | ..... | 50 | 65¼ | 82½ |
| Iron, | 830,000 | 493,000 | 1,323,000 | ..... | ..... | ..... | 40 | 39½ | 63½ |
| Rolling Skelp Iron, | 285,754 | 222,878 | 508,632 | ..... | ..... | ..... | 35 | 42¼ | 62⅝ |
| Iron and Steel, Hoop and Band, &c., | 50,680 | 78,112 | 128,792 | ..... | ..... | ..... | 13 | 23⅔ | 33⅞ |
| Brass Founders, Iron Pipe, &c., | 59,246 | 45,708 | 104,954 | ..... | ..... | ..... | 17⅔ | 16¾ | 31⅔ |
| Rolling Mill Machinery, | 122,910 | 89,700 | 212,610 | ..... | ..... | ..... | 46 | 63¾ | 80⅙ |
| Foundry and Machine Shops, | 64,583 | ..... | 54,559 | ..... | 10⅔ | ..... | 40 | ..... | 34½ |
| Brass Founders, Machinists, &c., | 68,126 | ..... | 60,305 | ..... | 02¾ | ..... | 19⅓ | ..... | 17⅛ |

*Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1895 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Iron and Steel, | $231,000 | $170,000 | $401,000 | ..... | ..... | ..... | 09½ | 07⅛ | 15½ |
| Pig Metal, | ..... | 278,064 | 253,150 | 02 | ..... | ..... | ..... | 22¾ | 21⅛ |
| Founders and Machinists, | 344,456 | 2,656 | 347,112 | ..... | ..... | ..... | 56⅔ | 01⅛ | 57¼ |
| General Machinery, | 26,965 | 136,063 | 163,022 | ..... | ..... | ..... | 06 | 32¼ | 36¼ |
| Engines and Boilers, | 178,668 | 281,773 | 460,441 | ..... | ..... | ..... | 14 | 26⅔ | 37¼ |
| Boilers, | ..... | 110,000 | 85,666 | 18⅔ | ..... | ..... | ..... | 44 | 38 |
| Radiators, | ..... | ..... | ..... | 18 | 10¼ | 30¼ | ..... | ..... | ..... |
| Iron Products, | 477,190 | 1,202,204 | 1,679,394 | ..... | ..... | ..... | 10 | 29¼ | 36½ |
| Axles, | 4,000 | 5,213 | 9,213 | ..... | ..... | ..... | 16 | 24⅔ | 36⅞ |
| Roll Foundry, | ..... | 113,333 | 56,159 | 13 | ..... | ..... | ..... | 26⅛ | 14⅞ |
| Iron Foundry, | 38,987 | ..... | 35,610 | ..... | 09¼ | ..... | 51⅔ | ..... | 47¼ |
| Foundry, | 11,442 | 20,327 | 31,769 | ..... | ..... | ..... | 06¼ | 11⅞ | 17⅓ |
| Iron Foundry, | 3,122 | ..... | ..... | . . . | 344½ | 325¼ | | . . . | . . . |
| Rolling Mill and Tin Plate Machinery, &c., | 47,123 | 42,318 | 89,441 | ..... | ..... | ..... | 20½ | 23¼ | 39 |
| Iron, Steel and Brass Castings, &c., | 205,450 | 287,188 | 492,638 | ..... | ..... | ..... | 21½ | 46⅓ | 59¾ |
| Pig Iron, | 689,197 | ..... | 661,017 | ..... | 02 | ..... | 33⅓ | ..... | 31⅔ |
| Steel Castings, | 134,094 | 4,022 | 138,116 | ..... | ..... | ..... | 58 | 04¼ | 60 |
| Steel Castings, | 209,049 | 176,891 | 385,940 | ..... | ..... | ..... | 24 | 27 | 44⅝ |
| Merchant Bar Iron, | 244,740 | 272,240 | 516,980 | ..... | ..... | ..... | 30½ | 48⅞ | 64½ |
| Steel and Copper, | 693,606 | ..... | 629,492 | ..... | 01¾ | ..... | 15 | ..... | 13⅞ |
| Iron Beams, Girders, &c., | 3,604 | ..... | ..... | ..... | 04 | 01½ | 02⅓ | ..... | ..... |
| Iron Founders, | 40,000 | 109,471 | 149,471 | ..... | ..... | ..... | 10 | 68⅜ | 74⅔ |
| Iron Founders, | 150,000 | 150,000 | 300,000 | ..... | ..... | ..... | 20 | 25 | 40 |
| Stoves, | 2,597 | 15,201 | 17,798 | ..... | ..... | ..... | 04¾ | 29¼ | 32⅔ |
| Iron Founders, | ..... | ..... | ..... | 15⅔ | 34 | 55 | ..... | ..... | ..... |
| Boiler Makers, | ..... | ..... | ..... | 19⅔ | 11⅓ | 33 | ..... | ..... | ..... |
| Iron Founders, | 197,000 | ..... | 182,770 | ..... | 05⅔ | ..... | 44 | ..... | 40¾ |
| Boiler Makers, | 180,000 | 130,000 | 310,000 | ..... | ..... | ..... | 51½ | 76½ | 88 |
| Boiler Makers,* | 300,000 | 350,000 | 650,000 | ..... | ..... | ..... | 46 | ..... | ..... |

## *Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1895 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Engines, | $243,000 | $4,000 | $247,000 | ..... | ..... | ..... | 71½ | 04⅛ | 72⅔ |
| Malleable Iron Castings, | 64,755 | 68,237 | 132,992 | ... | .. | .... | 22 | 30 | 45½ |
| Engines and Oil Well Supplies, | 48,035 | 9,759 | 38,276 | ..... | ..... | ..... | 24 | 06⅓ | 19 |
| Engines, | 32,000 | 2,000 | 34,000 | ..... | ..... | ..... | 22½ | 01⅔ | 23½ |
| Boiler Works, | 33,775 | 38,413 | 72,188 | ..... | ..... | ..... | 31 | 51⅓ | 66⅓ |
| Engines, | 20,000 | 40,000 | 60,000 | ..... | ..... | ..... | 16⅔ | 40 | 50 |
| Iron Works, | 105,000 | 105,000 | 210,000 | ..... | ..... | ..... | 13 | 14¾ | 25¾ |
| Blast Furnace, | ..... | 139,586 | 136,370 | 008⅔ | ..... | ..... | ..... | 36⅞ | 36⅓ |
| Iron, | 68,464 | 38,742 | 107,206 | ..... | ..... | ..... | 24 | 18 | 38 |
| Iron Works,* | 98,572 | 554,900 | 653,452 | ..... | ..... | ..... | 15 | ..... | ..... |
| Pig and Skelp Iron, | 332,800 | 327,860 | 660,660 | ..... | ..... | ..... | 40 | 65⅓ | 79¼ |
| Muck Bar and Nails (Iron), | 40,000 | ..... | 25,120 | ..... | 13½ | ..... | 26⅔ | ..... | 16¾ |
| Steam Boilers, | 16,727 | 38,858 | 55,585 | ..... | ..... | ..... | 08 | 20⅔ | 27⅓ |
| Iron and Steel, | 2,064,000 | 2,852,161 | 4,916,161 | ..... | ..... | ..... | 19½ | 33¼ | 46¼ |
| Iron, | ..... | ..... | ..... | 07 | ..... | 07½ | ..... | ..... | ..... |
| Foundry and Machine Shop, | 5,000 | ..... | ..... | ..... | 25 | 11⅛ | 11 | ..... | ..... |
| Iron Foundry, | 103,032 | 79,272 | 182,304 | ..... | ..... | ..... | 37 | 45⅓ | 65½ |
| Rolling Mill, | 111,481 | ..... | 82,804 | ..... | 08⅔ | ..... | 25½ | ..... | 19¼ |
| Pig Iron, | 347,963 | 510,832 | 858,795 | ..... | ..... | ..... | 17¾ | 31⅓ | 43½ |
| Pig Iron, Merchant, Bar, &c., | 714,399 | 110,424 | 824,823 | ..... | ..... | ..... | 43 | 11¾ | 50 |
| Locomotives, | ..... | 4,743,077 | 4,236,279 | 07 | ..... | ..... | ..... | 61¾ | 59 |
| Rolling Mill Machinery, | ..... | 31,593 | 25,562 | 09 | ..... | ..... | ..... | 42⅞ | 37⅞ |
| Iron and Steel, | ..... | 4,696,555 | 1,779,234 | 06⅓ | ..... | ..... | ..... | 09½ | 03⅞ |
| Steel Rails, Billets, &c., | 2,357,625 | 303,923 | 2,661,548 | ..... | ..... | ..... | 53¼ | 14½ | 60⅛ |
| Steel, | 354,268 | 265,605 | 619,873 | ..... | ..... | ..... | 49 | 73 | 86¼ |
| Repairing and Building Passenger and Freight Cars, | 404,057 | 1,015,505 | 1,419,562 | ..... | ..... | ..... | 10½ | 29⅓ | 36⅞ |

*Plant not operated in 1894.

*Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| New Locomotives and Repairs, | $323,372 | $592,314 | $915,686 | ..... | ..... | ..... | 08⅓ | 16½ | 23⅓ |
| Acid Open Hearth Steel Plates and Sheets, | ..... | ..... | ..... | 37 | 10⅞ | 51⅞ | ..... | ..... | ..... |
| Boilers, Plate and Sheet Iron Work, | ..... | 12,282 | 115 | 22 | ..... | ..... | ..... | 18¼ | 002 |
| Bar Iron, Railroad Spikes, &c., | 33,198 | ..... | 23,722 | ..... | 10½ | ..... | 26⅔ | ..... | 19⅛ |
| Locomotives, | ..... | 702,480 | 524,163 | 15¾ | ..... | ..... | ..... | 54 | 46½ |
| Merchant Iron, | 150,897 | 63,334 | 214,231 | ..... | ..... | ..... | 46½ | 37 | 66½ |
| Bar Iron, | 66,944 | 64,643 | 131,587 | ..... | ..... | ..... | 20 | 25 | 40½ |
| Steel-tired Car Wheels, | 63,348 | 53,348 | 69,059 | ..... | ..... | ..... | 36⅔ | 31⅞ | 39⅞ |
| Drop Forgings, | 28,246 | ..... | 16,632 | ..... | 17½ | ..... | 29⅔ | ..... | 17½ |
| Stoves, Ranges and Furnaces, | ..... | 114,761 | 102,145 | 02½ | ..... | ..... | ..... | 21⅔ | 19⅔ |
| Car Wheels, Car Axles and Cars, | 1,435,643 | ..... | 1,409,651 | ..... | 20 | ..... | 96 | ..... | 90 |
| Locomotives, Stationery Engines, Boilers, &c., | 183,324 | 230,006 | 413,330 | ..... | ..... | ..... | 21 | 33¼ | 47¼ |
| Merchant Iron, | 310,616 | 541,469 | 852,085 | ..... | ..... | ..... | 18 | 38 | 49 |
| Iron Works, | 25,000 | 100,000 | 125,000 | ..... | ..... | ..... | 06⅓ | 27 | 31⅞ |
| Iron Foundry, | 115,293 | ..... | 83,729 | ..... | 05⅞ | ..... | 17½ | ..... | 12⅔ |
| Tool Manufacturers, | 45,479 | 35,539 | 81,018 | ..... | ..... | ..... | 13⅓ | 12½ | 24⅔ |
| Car Wheels, | 98,959 | 64,728 | 163,687 | ..... | ..... | ..... | 21½ | 18 | 35¾ |
| Stoves, Heaters, Ranges, &c., | 16,000 | 46,902 | 62,902 | ..... | ..... | ..... | 06⅔ | 20⅞ | 26¼ |
| Power Transmitting Machinery, | ..... | 139,080 | 130,640 | ..... | 02⅓ | ..... | ..... | 37⅔ | 36⅛ |
| Boiler and Tank Plates, | 174,366 | 179,147 | 353,513 | ..... | ..... | ..... | 35 | 54⅔ | 70⅔ |
| Foundry and Machine Shop, | 19,170 | 23,250 | 42,420 | ..... | ..... | ..... | 27 | 45 | 60 |
| Machine Tools and Steam Hammers, | ..... | 662,528 | 550,384 | 13½ | ..... | ..... | ..... | 70½ | 66⅔ |

*Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Pig Iron, | $582,387 | $350,294 | $932,681 | ..... | ..... | ..... | 28 | 24⅛ | 45⅞ |
| Foundry and Machinery, | 50,000 | 27,000 | 77,000 | ..... | ..... | ..... | 09¾ | 05⅞ | 15¼ |
| Pig Iron, Cut Nails, &c., | ..... | 192,556 | 131,633 | 08½ | ..... | ..... | ..... | 25¼ | 18¾ |
| Iron and Steel Nails, &c., | 895,000 | 341,500 | 1,236,500 | ..... | ..... | ..... | 44¼ | 30½ | 61 |
| Bar Iron and Forgings, | 113,128 | 104,777 | 217,905 | ..... | ..... | ..... | 36¼ | 52⅔ | 69⅞ |
| Stoves, Ranges, &c., | 7,646 | 8,855 | 16,501 | ..... | ..... | ..... | 04¾ | 05¾ | 10¼ |
| Boilers, | ..... | ..... | ..... | 57⅞ | 05⅔ | 66½ | ..... | ..... | ..... |
| Steam Engines and Boilers, | 10,000 | 15,000 | 25,000 | ..... | ..... | ..... | 14⅓ | 25 | 35¾ |
| Saws, Tools, &c., | 263,272 | 90,845 | 354,117 | ..... | ..... | ..... | 14½ | 05¾ | 19¼ |
| Files, | 31,046 | 21,504 | 52,550 | ..... | ..... | ..... | 10⅞ | 08½ | 18½ |
| Cast Iron Pipe, | ..... | 17,356 | ..... | 18½ | ..... | 11½ | ..... | 05⅔ | ..... |
| Car Wheels, &c., | ..... | 361,106 | 325,563 | 04¾ | ..... | ..... | ..... | 47⅛ | 44 |
| Foundry, | ..... | 35,864 | 22,799 | 14½ | ..... | ..... | ..... | 34¾ | 25⅛ |
| Merchant Bar Iron, | 10,000 | 73,600 | 83,609 | ..... | ..... | ..... | 03¾ | 28⅞ | 31½ |
| Railroad Equipment, &c., | 282,113 | 281,925 | 564,028 | ..... | ..... | ..... | 28¼ | 39⅓ | 56½ |
| Wrought Iron Pipe, | 15,504 | 40,622 | 56,126 | ..... | ..... | ..... | 17½ | 55½ | 63¼ |
| Blast Furnace, | 257,205 | 143,664 | 400,869 | ..... | ..... | ..... | 28⅔ | 22½ | 44¾ |
| Sheet and Plate Iron and Steel, | 114,649 | 44,265 | 158,914 | ..... | ..... | ..... | 17½ | 08⅛ | 24 |
| Cut Nails, | 42,338 | 97,798 | 140,136 | ..... | ..... | ..... | 10⅓ | 26⅔ | 34¼ |
| Foundry and Machine Work, | 18,461 | 11,754 | 30,215 | ..... | ..... | ..... | 18 | 14 | 30 |
| Chain Works, &c., | 55,000 | 58,019 | 113,019 | ..... | ..... | ..... | 31½ | 48⅓ | 64¾ |
| Metal and Wood, | 26,000 | 59,469 | 85,469 | ..... | ..... | ..... | 19⅛ | 54 | 62⅞ |
| Electric Street Cars, | ..... | 104,442 | 57,012 | 05½ | ..... | ..... | ..... | 73⅛ | 71⅞ |
| Tacks and Nails, | 3,951 | ..... | ..... | ..... | 29½ | 21⅞ | 06 | ..... | ..... |
| Sheet Steel, Plates, &c., | 141,255 | 31,466 | 172,721 | ..... | ..... | ..... | 22½ | 08¼ | 27¼ |
| Rails, Bars, Splices, &c., | ..... | 537,120 | 238,929 | 62⅔ | ..... | ..... | ..... | 86¾ | 78⅔ |
| Iron and Steel Sheets, | 26,323 | ..... | 21,466 | ..... | 01⅛ | ..... | 05⅞ | ..... | 04¾ |
| Street Railway Rails, Switches, &c., | 707,778 | 19,143 | 717,921 | ..... | ..... | ..... | 15¾ | 002⅔ | 16 |
| Merchant Bar Iron, &c., | 11,049 | ..... | ..... | ..... | 325½ | 197⅓ | 32⅔ | ..... | ..... |
| Ship Building, | ..... | 326,528 | ..... | 65⅞ | ..... | 005 | ..... | 39⅛ | ..... |

*Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892 | 1895 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Iron and Nails, | ..... | $76,293 | $36,938 | 21½ | ..... | ..... | ..... | 34⅓ | 20¼ |
| Foundry and Machine Shop, &c., | ..... | 615,046 | 201,523 | 66½ | ..... | ..... | ..... | 69⅜ | 50 |
| Pig Iron, | $28,115 | 45,450 | 73,565 | ..... | ..... | ..... | 10⅔ | 19 | 27⅞ |
| Steel Castings, | ..... | 11,446 | ..... | 12 | ..... | 99 | ..... | 09½ | ..... |
| Wire Nails, | 269,222 | ..... | 15,884 | ..... | 14⅞ | ..... | 13½ | ..... | .008 |
| Nails, | 83,335 | 73,226 | 156,561 | ..... | ..... | ..... | 35 | 38⅞ | 57½ |
| Blast Furnaces, | 139,426 | ..... | ..... | . . . | 28⅓ | 009⅓ | 22½ | . . . | . . . |
| Steel and Plate Iron, &c., | 170,000 | 42,896 | 212,896 | ..... | ..... | ..... | 23½ | 07¾ | 30⅞ |
| Iron and Steel Pipe, &c., | ..... | 152,249 | 96,140 | 07⅞ | ..... | ..... | ..... | 19⅞ | 13⅔ |
| Bronze and Brass Castings, | 20,000 | 80,000 | 100,000 | ..... | ..... | ..... | 13⅓ | 61½ | 66⅔ |
| Steam Engines, Pumping Engines, &c., | ..... | 102,350 | 33,050 | 10⅔ | ..... | ..... | ..... | 14¼ | 05 |
| Iron and Steel Bridge Material, | 36,000 | 453,000 | 489,000 | ..... | ..... | ..... | 04⅔ | 57½ | 59⅓ |
| Iron and Steel Cut Nails, | 122,073 | 77,082 | 109,755 | ..... | ..... | ..... | 28⅛ | 24⅞ | 46⅛ |
| Cook Stoves, Ranges, &c., | 13,744 | 30,789 | 44,533 | ..... | ..... | ..... | 15⅞ | 42½ | 51¾ |
| Iron and Steel Boilers, &c., | ..... | 220,460 | 99,174 | 11¾ | ..... | ..... | ..... | 18⅞ | 09⅔ |
| Pig Iron, | 806,305 | 550,196 | 1,356,501 | ..... | ..... | ..... | 46¼ | 58¾ | 77⅔ |
| Iron and Steel Plates, Tanks, &c., | 360,180 | 209,218 | 560,458 | ..... | ..... | ..... | 26¾ | 20⅓ | 41⅔ |
| Iron, | 22,300 | 14,900 | 37,200 | ..... | ..... | ..... | 32⅓ | 32¼ | 54 |
| Iron Foundry, | 8,000 | 1,000 | 9,000 | ..... | ..... | ..... | 10⅞ | 15⅓ | 12⅓ |
| Boiler, Tube, Skelp Iron, and Steel, | 102,562 | 103,035 | 205,597 | ..... | ..... | ..... | 22⅞ | 29⅞ | 46 |
| Iron and Steel, | 78,451 | 112,251 | 190,702 | ..... | ..... | ..... | 25⅔ | 49⅔ | 62½ |
| Founders, Machinists and Car Builders, | 11,415 | 14,335 | 25,750 | ..... | ..... | ..... | 10⅔ | 15 | 24 |
| Iron Works, | 183,225 | 57,098 | 240,323 | ..... | ..... | ..... | 14⅜ | 05¼ | 18⅞ |
| Boiler and Wrought Iron Works, | ..... | 17,000 | 3,000 | 10⅛ | ..... | ..... | ..... | 11¼ | 02¼ |
| Plate and Tube Iron, | 108,310 | 102,429 | 210,739 | ..... | ..... | ..... | 35¾ | 53 | 69⅔ |

## *Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1893 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Welded Iron Chains, &c., | $45,000 | $20,000 | $65,000 | ..... | ..... | ..... | 36 | 25 | 52 |
| Rolling Mill, | ..... | 137,762 | 107,472 | 07½ | ..... | ..... | ..... | 31⅞ | 26⅞ |
| Locomotives and Machinery, | ..... | 572,744 | 499,013 | 09⅛ | ..... | ..... | ..... | 65 | 61¾ |
| Iron and Steel Plates, | 230,000 | 130,000 | 360,000 | ..... | ..... | ..... | 32⅝ | 27¼ | 51 |
| Bessemer and Open Hearth Steel, | 713,884 | 1,736,384 | 2,450,268 | ..... | ..... | ..... | 69⅔ | 26⅛ | 33⅓ |
| Horse and Mule Shoes, | ..... | ..... | ..... | 13¾ | 13¾ | 29½ | ..... | ..... | ..... |
| Castings, | 10,000 | 30,000 | 40,000 | ..... | ..... | ..... | 10⅛ | 37½ | 44½ |
| Zinc and Iron, | 121,790 | 225,049 | 346,839 | ..... | ..... | ..... | 13¼ | 28⅓ | 37¾ |
| Iron and Brass Foundry, &c., | 117,500 | 60,000 | 177,500 | ..... | ..... | ..... | 46⅔ | 52¼ | 70¾ |
| Iron Founders, | 131,600 | 50,400 | 182,000 | ..... | ..... | ..... | 60 | 57 | 82¾ |
| Total, | $30,884,111 | $42,573,399 | $73,457,510 | ..... | ..... | ..... | 14 | 22½ | 33⅜ |
| *Carpets.* | | | | | | | | | |
| Carpets, | $100,000 | $55,000 | $155,000 | ..... | ..... | ..... | 26⅔ | 20 | 41⅓ |
| Carpets, | 52,401 | 43,081 | 95,482 | ..... | ..... | ..... | 10½ | 11¾ | 23¾ |
| Carpets, | 68,209 | ..... | 42,655 | ..... | 15¾ | ..... | 26 | ..... | 18¾ |
| Carpets, | 50,000 | 100,000 | 150,000 | ..... | ..... | ..... | 14 | 33⅓ | 42⅞ |
| Carpets, | 71,000 | ..... | 65,000 | ..... | 04 | ..... | 33 | ..... | 30 |
| Carpets, | 175,000 | 132,156 | 307,156 | ..... | ..... | ..... | 20⅔ | 28¾ | 47¼ |
| Carpets, | 184,103 | ..... | 137,348 | ..... | 08½ | ..... | 26 | ..... | 19¾ |
| Carpets, | 3,978 | 108 | 4,086 | ..... | ..... | ..... | 09½ | .003 | 09¼ |
| Carpets, | 205,085 | ..... | 84,782 | ..... | 30⅓ | ..... | 34½ | ..... | 14⅛ |
| Carpets, | 135,720 | 33,274 | 168,994 | ..... | ..... | ..... | 42 | 12 | 52⅔ |
| Carpets, | 196,938 | ..... | 110,790 | ..... | 22½ | ..... | 34 | ..... | 19 |
| Carpets, | 62,499 | ..... | 41,243 | ..... | 11⅓ | ..... | 25 | ..... | 16½ |
| Carpets, | 143,317 | ..... | 85,067 | ..... | 07 | ..... | 15 | ..... | 08¾ |
| Carpets,* | 224,444 | 724,374 | 948,818 | ..... | ..... | ..... | 23⅔ | ..... | ..... |
| Carpets, | 50,498 | 41,736 | 92,234 | ..... | ..... | ..... | 14 | 13⅔ | 26 |
| Carpets, | 151,170 | 40,752 | 191,922 | ..... | ..... | ..... | 27 | 10⅛ | 34⅔ |

*Plant not operated in 1894.

## *Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1895 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Carpets, | $9,748 | $41,459 | $51,207 | ..... | ..... | ..... | 07 | 33 | 37¾ |
| Carpets, | 165 | 42,387 | 42,552 | ..... | ..... | ..... | .002 | 50⅜ | 50½ |
| Carpets.* | 60,000 | 40,000 | 100,000 | ..... | ..... | ..... | 60 | ..... | ..... |
| Carpets, | 49,438 | 4,066 | 53,504 | ..... | ..... | ..... | 36½ | 04¼ | 35 |
| Carpets, | 10,499 | 6,485 | 16,984 | ..... | ..... | ..... | 02¼ | 01⅓ | 03¾ |
| Carpets, | ..... | ..... | ..... | 53¼ | 38¼ | 112 | ..... | ..... | ..... |
| Carpets, | 20,000 | 59,000 | 79,000 | ..... | ..... | ..... | 16 | 56¼ | 63¼ |
| Carpets, | 114,090 | 281 | 114,371 | ..... | ..... | ..... | 33 | .001 | 33⅛ |
| Carpets, | 18,680 | 6,167 | 21,847 | ..... | ..... | ..... | 10½ | .06 | 24¾ |
| Carpets, | 30,000 | ..... | ..... | ..... | 33⅓ | 06⅔ | .20 | ..... | ..... |
| Total, | $2,151,982 | $938,490 | $3,090,472 | ..... | ..... | ..... | 23⅓ | 13¼ | 33⅓ |
| *Hosiery.* | | | | | | | | | |
| Hosiery,* | $35,000 | $265,000 | $300,000 | ..... | ..... | ..... | .11⅔ | ..... | ..... |
| Hosiery, | 53,826 | ..... | 34,110 | ..... | 16¼ | ..... | .34⅔ | ..... | 21⅞ |
| Hosiery, | 90,000 | ..... | 24,000 | ..... | 46 | ..... | .38½ | ..... | 10¼ |
| Hosiery, | 15,000 | ..... | 4,000 | ..... | 23¾ | ..... | .30 | ..... | .08 |
| Hosiery, | 13,897 | ..... | 3,639 | ..... | 13⅞ | ..... | .05 | ..... | 04⅔ |
| Hosiery, | 16,000 | 6,000 | 22,000 | ..... | ..... | ..... | .30¼ | 16 | 41½ |
| Hosiery, | 42,581 | 11,415 | 53,996 | ..... | ..... | ..... | .19⅓ | 06⅜ | 24½ |
| Hosiery, | 94,000 | ..... | 81,000 | ..... | 02⅔ | ..... | .16⅔ | ..... | 14½ |
| Hosiery, | ..... | ..... | ..... | .53 | 31⅛ | 100 | ..... | ..... | ..... |
| Hosiery, | 80,000 | ..... | 47,703 | ..... | 51⅔ | ..... | .72⅞ | ..... | 56½ |
| Total, | $431,529 | $122,268 | $553,797 | ..... | ..... | ..... | 24¼ | .09⅛ | 31⅛ |
| *Woolens.* | | | | | | | | | |
| Woolen Goods, | $175,890 | ..... | $141,795 | ..... | 06¾ | ..... | .25 | ..... | 20¼ |
| Woolen Goods, | ..... | ..... | ..... | 00½ | .01½ | 02½ | ..... | ..... | ..... |
| Woolen Goods, | 38,022 | ..... | 30,355 | ..... | 03¾ | ..... | .16⅛ | ..... | 19¼ |
| Woolen Goods, | 62,154 | $113,157 | 175,311 | ..... | ..... | ..... | .22 | 51⅝ | 62½ |

*Plant not operated in 1894.

## *Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| Character of Industry. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1895 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Woolen Goods, | $920,000 | ..... | $647,000 | ..... | 82¾ | ..... | .73½ | ..... | 51¾ |
| Woolen Goods, | 82,000 | $188,000 | 270,000 | ..... | ..... | ..... | .15½ | 42¼ | 51¼ |
| Woolen Goods, | 183,000 | 17,000 | 200,000 | ..... | ..... | ..... | .66½ | 19⅝ | 72¾ |
| Woolen Cloth, | 34,000 | 17,000 | 51,000 | ..... | ..... | ..... | 22⅛ | 14⅔ | 33⅔ |
| Woolen Goods, | ..... | 74,510 | 49,518 | 13⅞ | ..... | ..... | ..... | 35⅞ | 27⅜ |
| Woolen Yarns, | ..... | ..... | ..... | 02½ | 10⅙ | 12¾ | ..... | ..... | ..... |
| Worsted Yarns, | 38,862 | ..... | 2,377 | ..... | 32 | ..... | .26 | ..... | 01½ |
| Worsted Goods, | 102,500 | ..... | 85,000 | ..... | 24½ | ..... | .59 | ..... | 49½ |
| Woolen Yarns, | 212,231 | ..... | 186,531 | ..... | 07¾ | ..... | .39¾ | ..... | 35 |
| Woolen Yarns, | 89,745 | 47,713 | 137,458 | ..... | ..... | ..... | .37¼ | 31½ | 56¾ |
| Woolen Goods, | 99,000 | ..... | 86,000 | ..... | 04⅓ | ..... | .25 | ..... | 21⅔ |
| Woolen Yarns, | 38,840 | 45,745 | 84,585 | ..... | ..... | ..... | .37 | 68¾ | 80⅜ |
| Woolen Goods, | 55,768 | 36,493 | 92,261 | ..... | ..... | ..... | .22¼ | 18⅝ | 36 |
| Woolen Yarns, | 71,886 | 3,097 | 74,982 | ..... | ..... | ..... | .39⅔ | 02¾ | 41¼ |
| Woolen Yarns,* | 200,665 | 198,268 | 398,933 | ..... | ..... | ..... | .50⅓ | ..... | ..... |
| Woolen Yarns, | ..... | ..... | ..... | .27¼ | ..... | ..... | ..... | ..... | ..... |
| Woolen Yarns,* | 250,000 | 150,000 | 400,000 | ..... | ..... | ..... | 62⅓ | ..... | ..... |
| Worsted Yarns, | 351,647 | 22,063 | 373,710 | ..... | ..... | ..... | .50 | 06¼ | 53 |
| Worsted and Woolen Goods, | 186,693 | ..... | 165,770 | ..... | 03⅞ | ..... | .26 | ..... | 23 |
| Woolen Goods, | 496,804 | 245,435 | 742,239 | ..... | ..... | ..... | .27¾ | 18⅞ | 41½ |
| Woolen Goods, | 55,000 | ..... | 32,000 | ..... | 30¼ | ..... | 42⅓ | ..... | 24⅔ |
| Woolen Yarns, | 46,970 | 90,333 | 137,303 | ..... | ..... | ..... | 17¾ | 41½ | 51½ |
| Woolen and Worsted Goods, | ..... | 248,892 | 153,155 | 12½ | ..... | ..... | ..... | 28⅞ | 20 |
| Total, | $3,633,338 | $566,374 | $4,199,712 | ..... | ..... | ..... | 32¼ | 07⅜ | 37¼ |
| *Cotton.* | | | | | | | | | |
| Cotton Goods, | $1,845 | $31,822 | $33,667 | ..... | ..... | ..... | .01¼ | 22⅛ | 23 |
| Cotton Goods, | 51,328 | 17,250 | 68,578 | ..... | ..... | ..... | .36 | 18⅞ | 47⅛ |
| Cotton Goods,* | 38,000 | 12,000 | 50,000 | ..... | ..... | ..... | .76 | ..... | ..... |
| Cotton Goods, | 100,000 | ..... | 89,000 | ..... | 13¾ | ..... | 55½ | ..... | 55⅝ |

*Plant not operated in 1894.
||Out of business in 1894.

## *Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1895 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Cotton Goods, | ..... | $83,000 | $51,000 | .11½ | ..... | ..... | ..... | 27⅓ | 18⅔ |
| Cotton Goods, | 90,000 | ..... | 85,000 | ..... | 03⅛ | ..... | .36 | ..... | 34 |
| Cotton Damask, | 112,950 | ..... | 96,931 | ..... | 51½ | ..... | .78½ | ..... | 67⅓ |
| Cotton Yarns, | ..... | ..... | ..... | .02⅛ | 03⅞ | 06 | ..... | ..... | ..... |
| Cotton Weaving, | 75,000 | ..... | 75,000 | ..... | ..... | ..... | .27¼ | ..... | 27¼ |
| Cotton Goods, | 296,000 | ..... | 240,000 | ..... | 25 | ..... | .56¾ | ..... | 46⅙ |
| Cotton Yarn, | 51,000 | 42,900 | 93,900 | ..... | ..... | ..... | .22¼ | 24½ | 41½ |
| Cotton Yarns, | 14,800 | 16,000 | 30,800 | ..... | ..... | ..... | .26½ | 39 | 55¼ |
| Cotton Yarns, | 163,600 | ..... | 95,600 | ..... | 566 | ..... | .93 | ..... | 54½ |
| Cotton Goods, | 25,000 | ..... | ..... | ..... | 34¼ | 12 | .16⅔ | ..... | ..... |
| Cotton Goods, | 25,000 | 39,000 | 64,000 | ..... | ..... | ..... | .08⅓ | 14¼ | 21⅓ |
| Cotton Yarns, | 88,100 | ..... | 84,322 | ..... | 05 | ..... | .53½ | ..... | 51½ |
| Cotton Goods, | 105,300 | 71,007 | 176,307 | ..... | ..... | ..... | .29½ | 28⅛ | 49¼ |
| Cotton Goods, | 5,000 | 55,000 | 60,000 | ..... | ..... | ..... | .05 | 47⅓ | 60 |
| Cotton Goods, | 90,000 | ..... | 80,000 | ..... | 05⅝ | ..... | .52⅔ | ..... | 44½ |
| Cotton Goods,* | 17,420 | 50,534 | 67,954 | ..... | ..... | ..... | .25¾ | ..... | ..... |
| Cotton Goods, | 230,000 | 373,800 | 503,800 | ..... | ..... | ..... | .23½ | 49¾ | 51⅜ |
| Total, | $1,543,343 | $568,516 | $2,111,859 | ..... | ..... | ..... | 30⅔ | 16⅓ | 42 |
| *Glass.* | | | | | | | | | |
| Glass-ware, | $180,236 | $60,880 | $241,116 | ..... | ..... | ..... | .74 | ..... | ..... |
| Glass-ware, | 49,066 | 15,984 | 65,050 | ..... | ..... | ..... | 18 | 07½ | 24¾ |
| Glass-ware, | 63,002 | 50,913 | 113,915 | ..... | ..... | ..... | 39½ | 52½ | ..... |
| Glass-ware,‖ | 58,893 | 95,442 | 154,335 | ..... | ..... | ..... | 38 | ..... | ..... |
| Glass-ware, | 12,633 | 74,723 | 87,356 | ..... | ..... | ..... | 05⅔ | 35½ | 39 |
| Glass-ware, | 75,378 | 70,398 | 145,786 | ..... | ..... | ..... | 24 | ..... | ..... |
| Glass-ware, | 92,368 | 109,412 | 201,780 | ..... | ..... | ..... | 33⅓ | ..... | ..... |
| Glass-ware, | 44,130 | 32,243 | 76,373 | ..... | ..... | ..... | 25⅓ | ..... | ..... |
| Glass-ware, | ..... | 2,836 | ..... | 17½ | ..... | ..... | ..... | ..... | ..... |
| Glass-ware, | 65,000 | ..... | ..... | ..... | ..... | ..... | 16¼ | ..... | ..... |

*Out of business in 1894.
‖Plant not operated in 1894.

## *Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1895 over 1892. | 1894 over 1893. | 1894 over 1892 | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Plate Glass, | $271,355 | ..... | $269,557 | ..... | ..... | ..... | 41 | ..... | ..... |
| Window Glass, | ..... | ..... | ..... | 11⅓ | ..... | ..... | ..... | ..... | ..... |
| Glass-ware, | 30,106 | $85,688 | 115,794 | ..... | ..... | ..... | 12 | ..... | ..... |
| Bottles, | ..... | 47,823 | 25,084 | 57½ | ..... | ..... | ..... | 76½ | 63⅓ |
| Glass, | 32,136 | ..... | ..... | ..... | ..... | ..... | 10⅓ | ..... | ..... |
| Glass, | 80,800 | ..... | 80,800 | ..... | ..... | ..... | 25½ | ..... | 25½ |
| Glass Bottles, | 22,515 | 92,588 | 115,103 | ..... | ..... | ..... | 10¾ | ..... | ..... |
| Window Glass, | 75,704 | 36,005 | 111,709 | ..... | ..... | ..... | 43¾ | 37 | 64 |
| Glass-ware, | ..... | 8,000 | ..... | 30⅝ | ..... | ..... | ..... | ..... | ..... |
| Plate Glass, | 661,780 | ..... | 141,825 | ..... | ..... | ..... | 33⅛ | ..... | ..... |
| Total, | $1,710,323 | $130,494 | $1,840,817 | ..... | ..... | ..... | 26½ | 02¾ | 28½ |
| *Fabrics.* | | | | | | | | | |
| Hosiery and Underwear, | $75,000 | $125,000 | $200,000 | ..... | ..... | ..... | 10 | 18½ | 26⅔ |
| Silk and Wool, and Cotton and Wool, | 61,153 | 224,056 | 285,209 | ..... | ..... | ..... | 12 | 49¾ | 55⅔ |
| Chenille, Upholstery and Drapery, | 182,900 | ..... | 147,910 | ..... | 05⅔ | ..... | 23 | ..... | 18½ |
| Quilts, Lap Robes, &c., | 59,000 | 85,000 | 144,000 | ..... | ..... | ..... | 20⅔ | 37⅓ | 50⅓ |
| Knit Underwear, | 5,000 | 162,000 | 167,000 | ..... | ..... | ..... | 01¼ | 41 | 41¾ |
| Tapes, Webs and Fabrics, | 50,000 | ..... | 35,000 | ..... | 10 | ..... | 25 | ..... | 17½ |
| Turkish Towels, Rugs, &c., | 16,711 | 30,574 | 47,285 | ..... | ..... | ..... | 06¾ | 13⅛ | 19 |
| Lace, | 224,355 | ..... | ..... | ..... | 90¾ | 12⅓ | 41⅛ | ..... | ..... |
| Chenille Curtains, &c., | 471,061 | ..... | 367,360 | ..... | 23½ | ..... | 51⅞ | ..... | 40⅓ |
| Rugs, Lace Curtains, &c., | 28,787 | 190,933 | 219,720 | ..... | ..... | ..... | 03¾ | 25¾ | 28½ |
| Worsted Yarns and Spun Silk Yarns, | 20,336 | ..... | 7,466 | ..... | 12½ | ..... | 16½ | ..... | 06 |
| Chenille Curtains, Rugs, &c., | 92,169 | 20,901 | 113,070 | ..... | ..... | ..... | 26⅛ | 08 | 32⅛ |
| Plush, | 81 | 27,216 | 27,297 | ..... | ..... | ..... | 01⅓ | 44⅝ | 44⅔ |
| Cotton and Woolen Goods, | 2,472 | ..... | 863 | ..... | 12¾ | ..... | 16½ | ..... | 05⅔ |
| Turkish Towels, &c., | 11,000 | ..... | ..... | ..... | 38⅞ | 06⅜ | 23⅓ | ..... | ..... |

## *Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1895 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Worsted and Woolen Goods, | $29,558 | $10,296 | $39,854 | ..... | ..... | ..... | 11¼ | 04⅓ | 15⅓ |
| Cotton and Woolen Yarns,.. | 1,079 | 3,314 | 4,393 | ..... | ..... | ..... | 04 | 13 | 16⅔ |
| Hosiery and Hosiery Yarns,. | 16,041 | ..... | 8,963 | ..... | 12¾ | ..... | 22⅓ | ..... | 12½ |
| Textile, ..... | 3,874 | ..... | ..... | ..... | 121 | 73 | 21 | ..... | ..... |
| Tickings and Stripes, ..... | 20,395 | ..... | 13,231 | ..... | 15⅔ | ..... | 31 | ..... | 20 |
| Knitting Mills, ..... | ..... | 4,781 | ..... | .09⅓ | ..... | 08 | ..... | 01 | ..... |
| Plush, Table Covers, &c.,... | 15,133 | ..... | 13,885 | ..... | 64⅛ | ..... | 33⅔ | ..... | 30⅞ |
| Hosiery, ..... | ..... | 9,402 | 5,447 | 14⅔ | ..... | ..... | ..... | 30½ | 20¼ |
| Wood Working Machinery, | 24,016 | 23,132 | 47,148 | ..... | ..... | ..... | 20½ | 24⅞ | 30⅓ |
| Textile, ..... | 13,754 | 11,827 | 25,581 | ..... | ..... | ..... | 22½ | 25 | 41 |
| Wood Working Machinery,.. | 28,702 | ..... | 28,347 | ..... | .003 | ..... | 19⅓ | ..... | 19⅛ |
| Cotton and Woolen Yarns,.. | 17,844 | 13,514 | 31,358 | ..... | ..... | ..... | 27 | 27⅞ | 47½ |
| Cotton Goods, ..... | 25,000 | ..... | 25,000 | ..... | ..... | ..... | 50 | ..... | 50 |
| Cotton and Woolen Goods,.. | 125,000 | 35,000 | 160,000 | ..... | ..... | ..... | 41⅔ | 20 | 53⅓ |
| Cotton Carpet Yarn, ..... | 18,651 | 39,983 | 58,634 | ..... | ..... | ..... | 16 | 40¼ | 49⅔ |
| Dress and Cloak Trimmings, | 292,000 | 50,000 | 342,000 | ..... | ..... | ..... | 53⅞ | 20 | 63⅛ |
| Cotton and Woolen Goods,.. | 15,500 | ..... | 8,690 | ..... | 14⅞ | ..... | 25⅓ | ..... | 14⅛ |
| Rubber Boots and Shoes,.... | ..... | 134,633 | 38,180 | 12⅞ | ..... | ..... | ..... | 16 | 05 |
| Carpet Yarns, ..... | 62,415 | ..... | 58,250 | ..... | .06⅓ | ..... | 48⅔ | ..... | 45½ |
| Carpet Yarns, ..... | 48,750 | ..... | 48,750 | ..... | ..... | ..... | 32¾ | ..... | 32¾ |
| Cotton and Woolen Goods,.. | 81,727 | 101,837 | 183,564 | ..... | ..... | ..... | 17⅔ | .26⅔ | 39½ |
| Cotton and Woolen Cloths, | 58,859 | 30,139 | 88,998 | ..... | ..... | ..... | 33⅛ | 25⅜ | 50 |
| Cotton and Woolen Goods,.. | 30,000 | 42,200 | 72,200 | ..... | ..... | ..... | 14 | 22¾ | 33½ |
| Cottonades, ..... | 27,000 | ..... | 17,000 | ..... | 10⅔ | ..... | 22½ | ..... | 14⅛ |
| Carpets and Upholstery Fabrics, ..... | 85,000 | 25,000 | 110,000 | ..... | ..... | ..... | 29¾ | 12½ | 38⅔ |
| Worsted and Woolen Yarns, | 290,000 | 302,000 | 592,000 | ..... | ..... | ..... | 23 | 31⅛ | 47 |
| Cotton and Woolen Goods,.. | 76,752 | ..... | 75,390 | ..... | 01⅔ | ..... | 49⅛ | ..... | 48¼ |
| Cotton and Woolen Cloth, &c., ..... | 14,120 | ..... | 2,858 | ..... | 13¾ | ..... | 14¾ | ..... | 03 |
| Cotton and Woolen Yarn,.... | 43,232 | 13,800 | 57,032 | ..... | ..... | ..... | 37 | 18¾ | 48¾ |
| Knit Goods, ..... | 32,000 | ..... | 27,000 | ..... | 03½ | ..... | 18 | ..... | 15¼ |

## *Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1895 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Cotton, Woolen and Merino Yarns, | $23,000 | $23,000 | $46,000 | ..... | ..... | ..... | 27¾ | 38⅓ | 55⅓ |
| Hosiery and Knit Goods, | 27,476 | 14,459 | 41,935 | ..... | ..... | ..... | 12⅔ | 07⅔ | 19⅓ |
| Woolen and Merino Yarns, | 46,127 | 46,492 | 92,619 | ..... | ..... | ..... | 32⅓ | 48⅓ | 65 |
| Worsted Goods, | 350,000 | ..... | 200,000 | ..... | 100 | ..... | 70 | ..... | 40 |
| Knit Underwear, | 15,418 | 39,539 | 54,957 | ..... | ..... | ..... | 07¾ | 21½ | 27¾ |
| Cheviots, | 49,685 | ..... | 41,402 | ..... | 21¾ | ..... | 56¾ | ..... | 47¼ |
| Cotton and Worsted Goods, | 42,359 | 62,344 | 104,703 | ..... | ..... | ..... | 13 | 21⅞ | 32 |
| Table Covers, &c., | 27,718 | ..... | 25,618 | ..... | 02⅓ | ..... | 23⅓ | ..... | 21½ |
| Cotton, Merino and Worsted Goods, | 50,496 | ..... | 42,106 | ..... | 09¾ | ..... | 37⅛ | ..... | 31 |
| Carpet and Rug Yarn, | 120,107 | 43,917 | 164,024 | ..... | ..... | ..... | 32¾ | 17¾ | 44⅔ |
| Cotton and Woolen Goods,* | 62,025 | 118,200 | 180,225 | ..... | ..... | ..... | 34⅓ | 100 | 100 |
| Chenille Goods, | 47,528 | 5,636 | 53,164 | ..... | ..... | ..... | 38¼ | 07⅔ | 42⅔ |
| Knit Underwear, | 168,865 | 36,537 | 205,402 | ..... | ..... | ..... | 53 | 24⅜ | 64½ |
| Knit Goods, | ..... | 42,324 | 17,301 | 13¼ | ..... | ..... | ..... | 19¾ | 09⅙ |
| Hosiery and Underwear, | 16,662 | 42,254 | 58,916 | ..... | ..... | ..... | 10¼ | 29 | 36⅓ |
| Dress Trimmings and Braids, | 215,000 | 64,000 | 279,000 | ..... | ..... | ..... | 51¼ | 31¼ | 66⅓ |
| Chenille Curtains and Covers, | ..... | ..... | ..... | 20 | 16¾ | 40¼ | ..... | ..... | ..... |
| Wool Shoddies,* | 36,254 | 127,063 | 163,317 | ..... | ..... | ..... | 22¼ | 100 | 100 |
| Carpet and Carpet Yarns | 620,000 | ..... | 609,000 | ..... | 02⅛ | ..... | 54⅔ | ..... | 53⅔ |
| Table Covers and Mohair Plushes, | 73,586 | 56,775 | 130,361 | ..... | ..... | ..... | 41½ | 54¾ | 26⅓ |
| Yarns, | 8,646 | 10,334 | 18,980 | ..... | ..... | ..... | 25 | 40 | 55 |
| Cotton, Woolen and Mixed Goods, | 46,246 | ..... | 37,656 | ..... | 11¼ | ..... | 37¾ | ..... | 30¾ |
| Cotton and Woolen Goods, | 39,000 | 136,000 | 175,000 | ..... | ..... | ..... | 16⅔ | 69⅓ | 74⅓ |
| Silk Throwing and Silk Weaving, | ..... | ..... | ..... | .09 | 10⅓ | 20⅜ | ..... | ..... | ..... |

*Plant not operated in 1894.

*Statistics Relating to Manufacturing in Pennsylvania.*

| INDUSTRIES. | PRODUCT. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Character of Industry. | Decrease in value of production. | | | Percentage of increase in value of production. | | | Percentage of decrease in value of production. | | |
| | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. | 1895 over 1892. | 1894 over 1893. | 1894 over 1892. | 1893 from 1892. | 1894 from 1893. | 1894 from 1892. |
| Textile Fabrics, | $113,243 | ..... | $100,846 | ..... | 06 | ..... | 35 | ..... | 31⅙ |
| Hosiery Yarn, | 15,349 | ..... | 10,817 | ..... | 08 | ..... | 21⅓ | ..... | 15 |
| Organ and Piano, | 19,391 | $19,246 | 38,637 | ..... | ..... | ..... | 16 | 18⅞ | 31 |
| Blankets, Yarns, &c., | 298,754 | 412,706 | 711,460 | ..... | ..... | ..... | 15⅔ | 25⅔ | 37⅓ |
| Cabinet Organs, | 6,194 | 11,904 | 18,098 | ..... | ..... | ..... | 07¼ | 17⅓ | 24⅛ |
| Caramels, | 66,667 | 29,333 | 96,000 | ..... | ..... | ..... | 16⅔ | 08¾ | 24 |
| Silk Throwing (on commission,) | 194,500 | 2,500 | 197,000 | ..... | ..... | ..... | 46¼ | 01⅛ | 46¾ |
| Broad and Thrown Silks, | 1,950,000 | ..... | 974,000 | ..... | 156⅓ | ..... | 75¾ | ..... | 37¾ |
| Electric Light Carbons, | ..... | ..... | ..... | 18⅔ | 21⅓ | 44 | ..... | ..... | ..... |
| Sewing Machines, | 42,961 | 38,772 | 81,733 | ..... | ..... | ..... | 24⅓ | 29 | 46⅓ |
| Silk Throwing, | 1,695 | ..... | 2 | ..... | 13 | ..... | 11½ | ..... | ..... |
| Ribbons, | ..... | ..... | ..... | 05½ | 22½ | 29¼ | ..... | ..... | ..... |
| Silk Throwing, | ..... | ..... | ..... | 11 | 31 | 45½ | ..... | ..... | ..... |
| Silk Spinning and Weaving, | 198,299 | ..... | 163,405 | ..... | 08½ | ..... | 32⅓ | ..... | 26¾ |
| Parlor Matches, | 25,036 | 42,887 | 67,923 | ..... | ..... | ..... | 14 | 28 | 38 |
| Heating Apparatus, &c., | 17,171 | ..... | 8,059 | ..... | 15⅓ | ..... | 22⅜ | ..... | 10½ |
| Ornamental Iron Work, | 20,000 | ..... | 15,000 | ..... | 04½ | ..... | 15⅜ | ..... | 11½ |
| Agricultural Implements, | ..... | 758 | ..... | 22⅓ | ..... | 17¾ | ..... | .03¾ | ..... |
| Water Wheels, | ..... | 60,000 | 12,000 | 36⅓ | ..... | ..... | ..... | 33⅓ | .09⅛ |
| Agricultural Implements, | 96,240 | 27,907 | 124,147 | ..... | ..... | ..... | 15⅔ | 05⅛ | 19⅔ |
| Cotton and Woolen Goods, | 37,000 | 18,597 | 55,597 | ..... | ..... | ..... | 17 | 10⅓ | 25⅔ |
| Carpet Yarn, | 55,000 | ..... | 55,000 | ..... | ..... | ..... | 33⅓ | ..... | 33⅓ |
| Calico Printing, | 1,000,000 | ..... | 300,000 | ..... | 17½ | ..... | 20 | ..... | 06 |
| Cotton and Woolen Goods, | 88,000 | 37,000 | 125,000 | ..... | ..... | ..... | 57½ | 57 | 81⅔ |
| Cotton and Woolen Goods, | ..... | ..... | ..... | 18 | 02 | 20½ | ..... | ..... | ..... |
| Silk Plushes, | ..... | ..... | ..... | 06 | 19 | 26⅓ | ..... | ..... | ..... |
| Silk, | 300,000 | ..... | 150,000 | ..... | 50 | ..... | 50 | ..... | 25 |
| Total, | $9,128,827 | $527,642 | $9,656,469 | ..... | ..... | ..... | 27⅞ | 02¼ | 29½ |

# MINE ACCIDENTS.

The mining of coal is attended by many accidents, often fatal, to those who are employed in the business. The reports of the Mine Inspectors, made annually to the Department of Internal Affairs, have always contained a carefully prepared description of the causes of these accidents. The average annual production of anthracite coal per man during the last five years has been the following:

| | |
|---|---|
| 1893, | 342 tons. |
| 1892, | 352 tons. |
| 1891, | 360 tons. |
| 1890, | 281 tons. |
| 1889, | 242 tons. |

The average annual production of bituminous coal per man for the last five years is shown in the following table:

| | |
|---|---|
| 1893, | 531 tons. |
| 1892, | 590 tons. |
| 1891, | 564 tons. |
| 1890, | 609 tons. |
| 1889, | 565 tons. |

Next may be given a summary of the accidents, fatal and non-fatal, in mining coal. First of all, a comparison may be made between the fatal accidents attending the mining of coal in the two regions:

| | *1893.* | *1892.* | *1891.* | *1890.* | *1889.* |
|---|---|---|---|---|---|
| Anthracite, | 455 | 396 | 427 | 378 | 384 |
| Bituminous, | 131 | 133 | 237 | 146 | 105 |

The percentage of fatal and non-fatal accidents for the number employed during the last five years in the anthracite and bituminous regions is the following:

Anthracite Region.

| *Fatal Accidents.* | *Non-fatal Accidents.* |
|---|---|
| 1893, 1 to 303 employes. | 1893, 1 to 129 employes. |
| 1892, 1 to 327 employes. | 1892, 1 to 127 employes. |
| 1891, 1 to 288 employes. | 1891, 1 to 122 employes. |
| 1890, 1 to 311 employes. | 1890, 1 to 116 employes. |
| 1889, 1 to 312 employes. | 1889, 1 to 120 employes. |

Bituminous Region.

| *Fatal Accidents.* | *Non-fatal Accidents.* |
|---|---|
| 1893, 1 to 1624 employes. | 1893, 1 to 236 employes. |
| 1892, 1 to 592 employes. | 1892, 1 to 200 employes. |
| 1891, 1 to 312 employes. | 1891, 1 to 235 employes. |
| 1890, 1 to 458 employes. | 1890, 1 to 177 employes. |
| 1889, 1 to 581 employes. | 1889, 1 to 203 employes. |

The percentage of fatal and non-fatal accidents in the two regions for the period of five years, for the number of tons mined, is the following:

Anthracite Region.

| *Fatal Accidents.* | *Non-fatal Accidents.* |
|---|---|
| 1893, 1 for 103,691 tons. | 1893, 1 for 44,134 tons. |
| 1892, 1 for 115,501 tons. | 1892, 1 for 44,817½ tons. |
| 1891, 1 for 103,923 tons. | 1891, 1 for 44,253½ tons. |
| 1890, 1 for 106,260 tons. | 1890, 1 for 39,729 tons. |
| 1889, 1 for 101,490 tons. | 1889, 1 for 39,051½ tons. |

Bituminous Region.

| *Fatal Accidents.* | *Non-fatal Accidents.* |
|---|---|
| 1893, 1 for 331,465 tons. | 1893, 1 for 125,497 tons. |
| 1892, 1 for 350,199 tons. | 1892, 1 for 118,515½ tons. |
| 1891, 1 for 176,319 tons. | 1891, 1 for 133,081½ tons. |
| 1890, 1 for 273,420 tons. | 1890, 1 for 107,609½ tons. |
| 1889, 1 for 329,101 tons. | 1889, 1 for 114,803 tons. |

For a long period there were no legal regulations relating to coal mining. Every one could operate his mine as he pleased within the rules prescribed by the common law of the State. There were great differences among operators in their modes of mining, and in their regard for the health and safety of those whom they employed. Of course, for many years mine operations were conducted on a much smaller scale than they are at the present; fewer persons were employed; the mines, perhaps, were worked nearer the surface and injury to body and loss of life were less frequent. But twenty-five years ago the Legislature deemed that some regulations were needful for conducting the business, and accordingly a law was enacted in 1869 providing for the appointment of mine inspectors in Carbon and Schuylkill counties, and which prescribed their duties. The next year an elaborate law was enacted relating to the subject. This provided that plans should be made of every anthracite coal mine on a prescribed scale, and copies were to be furnished to the

inspectors, and whenever the operators failed to prepare such plans, then the law provided for their preparation by the inspectors.

By another provision, every owner or agent was required to provide two shafts or slopes, for ingress and egress that were to be available at all times to the employes. It was not necessary for these shafts or slopes to belong to the same mine. If mines were so conducted, or could be, that the persons employed had two modes of entering and going out, the law required nothing more. The law contained very specific directions concerning these two outlets; the distance from each other; the mode of making them, etc. Penalties were also inflicted upon those who neglected to provide them. The law further provided for a suitable building near the entrance of each mine, properly lighted and warmed and supplied with soft water for the use of the employes when entering and returning from their work.

This law contained very elaborate regulations relating to the ventilation of mines. Before its enactment owners or operators could do as they pleased, and many of the mines were badly ventilated. As every one knows, some mines are more easily ventilated than others, and even with the most improved appliances, used with the greatest care the ventilation of some mines remains imperfect. In other words, ventilation is much easier in some mines than in others, and therefore, notwithstanding all the legal requirements and the desire to observe them, some mines remain imperfectly ventilated. The law also provided for the employment of a mining boss in order to secure the better ventilation of every mine, as well as to provide for the health and safety of employes. He was to keep a careful watch over the ventilating apparatus, the air-ways, traveling-ways, and timbering as the mines advanced in their excavations, and to see that the loose coal, slate or rock was carefully secured against falling. He also had charge of the arrangements for signaling from the bottom to the top of the mine, and of many other matters appertaining to the safety of the men employed. He was required to examine carefully every morning the workings of all mines generating explosive gases before the miners entered them and also to ascertain that they were free from danger. Furthermore, miners were not permitted to enter until such an examination had been made and all causes of danger had been removed. Again, he and his assistants were required every evening after the miners had left to see that the doors of the passage-ways were properly closed and that all air-ways were free to admit the passing of air through them. The mining boss was required to measure the ventilation at least once a week at the inlet and the outlet and at other places, and to report his measurements monthly to the inspector.

Another provision of the law required the use of safety lamps, speaking tubes and hoisting machines. Boys under twelve years of age could not be employed in any mine; certificates of age were required and penalties were to be enforced for violating this provision of the law. The qualifications and duties of engineers were also described; they must be experienced, competent and sober, nor could any person be deputed by the operator or agent to meddle with the machinery. The engine was to be worked slowly and with great care whenever any person was ascending or descending; and when men were about to ascend or descend, as the case might be, the engineer was to be informed. No one was to interfere with the engineer in the discharge of his duties, nor ride on a loaded wagon in any shaft or slope, and in no case could more than ten men ride on a wagon or car in any mine.

Whenever any loss of life occurred, the party having charge of the mine in which such accident happened, was required to give notice to the coroner of the county, who in turn was required to hold an inquest to investigate into the cause of the accident, and if it was caused by the neglect or carelessness of the operator, then he was liable for damages.

The law also provided for the appointment of inspectors by the Governor on the recommendation of a board of examiners, and for their removal and salaries. They were required to give their whole time and attention to the duties of their business; to examine all the mines in their district as often as their duties would permit, or at least four times during a year; to see that every precaution was taken to insure the safety of the miners; that all the provisions of the law were obeyed and to attend all inquests held by a coroner on the bodies of persons killed in or about the mines. They had authority also to enter a mine at any time and examine it and its machinery, and to make inquiry relating to its condition, ventilation, lighting, and, in short, inquire "into all matters and things connected with or relating to the safety of the persons employed in or about the same." The operator was required to furnish the means necessary for the inspector's entrance and inspection. The inspector was required to make an annual report to the Governor of the Commonwealth. Furthermore, all boilers were to be examined and inspected by a competent boiler maker once in six months, and all machinery in the mines, especially in the coal breakers where boys worked, was to be properly fenced off and the top of each shaft was to be securely fenced, and the entrance of every abandoned slope and air, or other shaft. The law also provided for punishing miners and others who should injure safety lamps, or carry lighted pipes or matches into places were safety lamps were used, or who should

disturb any machinery or hoisting engine, or open a door and not close the same, whereby danger was caused in a mine; or enter any place against caution; or disobey any order given in executing the act; or to ride on a loaded car or carriage in any shaft or slope; or do any other act whereby the lives and health of persons were in danger, or an injury was caused to the mines and machinery. Furthermore, any miner having charge of a working place who should neglect to keep the roof properly propped or timbered, to prevent the falling of coal, slate or rock, was to be deemed guilty of a misdemeanor, and on conviction was to be punished by imprisonment and fine, at the discretion of the court.

Such is an outline of the more important provisions of the act of 1870 that first regulated the operation of coal mining. It was contended that the law was unconstitutional, infringing the rights of operators to conduct their business as freely as the constitution provided; but the courts made short work of this contention and declared that it was within the proper scope of the legislative authority to make regulations on this subject. The boundaries of the police power of the State are quite indefinite and must remain so; and every fresh exercise of this power must give rise to a renewal of the question. Very recently the Supreme Court of the United States has delivered a weighty utterance on this subject, with respect to the right of a state to prescribe regulations concerning the manufacture and sale of oleomargarine. The marked tendency of modern legislation and judicial decision is in the direction of the exercise of larger powers by the state that relate to the comfort, health and safety of its citizens. But when the mine operators opposed on the ground that it was an invasion of their rights, the question was newer and less understood by the people than it is at the present time. Yet the operators acquiesced in the decision, and since that time the wisdom of these regulations has been generally acknowledged, even by the operators themselves. While now and then an operator is inclined to disregard the law, most of them, so the mine inspectors report, evince a general disposition to observe it in good faith, believing that on the whole it is needful and beneficial to all who are concerned in the business.

In 1885 the law was amended in some particulars, and again in 1891. The last law provided for the examination of mine foremen, and the giving of certificates of qualification, which were thereafter required. Those who had been employed for a year prior to the law were granted a certificate of service. The law described more in detail the duties of inspectors and operators. It was modeled on the English law with such modifications as the different conditions of mining seemed to require, and was the work of a commis-

sion composed of six operators, six miners and the six mine inspectors then in office. The law regulating the mining of coal in the bituminous region was first enacted in 1877 and was amended or revised in 1893. Its main provisions, however, are similar to those contained in the law relating to the anthracite region and therefore need not be described here.

Enough, we think, has been said to convey a general idea of the nature of the regulations prescribed for securing the health and safety of miners. These show first a desire or spirit on the part of the legislative authority of the State to protect, as far as the law can do so, this class of workers. It remains now for consideration to ascertain how these regulations have been enforced, whether efficiently or otherwise, and what, on the whole, has been the effect of them in preserving the health and lives of those who are engaged in mining.

Elaborate tables have been prepared, showing the injuries as well as loss of life to those engaged in mining from the time when returns were first received from the inspectors to the present. In other words, these returns cover a period of twenty-three years. They exhibit the loss of life and injuries from mining, also the loss of life and injuries for the number of tons of coal produced, and also the losses and injuries with respect to the nationality of the persons employed. One of the unpleasant facts is that there has been no considerable diminution of late years either in the number of injuries or loss of life in proportion to the number of men employed or to the quantity of coal produced. Therefore, many persons wonder why, notwithstanding the regulations mentioned, the accidents should continue to be so great. What are the causes for them? Are the operators to blame or the men? Are the mines more dangerous to work than they were before? Are the operators employing or retaining persons who are less competent than they once were? In short, what are the reasons for the continued large percentage of accidents?

First, let us inquire whether or not the operators have performed their duty in lessening the number of injuries and loss of life since the enactment of the regulations mentioned. In other words, have they faithfully regarded them? The best answer that the Bureau can make is derived from the reports of the mine inspectors. These officers, as we have remarked, are examined by a competent board and are appointed by the Governor. In all cases they are practical miners and are supposed to be not only intelligent, but independent in their investigations. There is no reason why they should not be independent as they are not dependent in the least on the operators for any favors. The law prescribes their duties; they are paid

by the State, nor have we any reason to suppose that they have been unfaithful in performing their duties. Regarding their reports therefore as trustworthy, what evidence do they contain? It is by no means uniform. There are cases of disregard or disobedience of the law reported every year. The inspector in the first bituminous district reported a noteworthy instance of this kind last year. He ordered an operator to put in an additional slope as the law required, for the safety of the miners. The operator refused to comply, and an appeal was made to the court, which sustained the order of the inspector. The operator then obeyed and the slope was constructed. But open infractions of the law of this kind are not frequent; the inspectors report that generally the operators evince a willingness to comply with the law. In their reports the inspectors often give a general description of the condition of the mines under their inspection, and some extracts from them for 1893 will now be given. It may be remarked, however, that in many cases of imperfect ventilation, drainage or other defect, operators have not been negligent or disregardful of the law, but have not succeeded in keeping their mines in the very best condition compared with other mines because the natural difficulties were greater. The conditions of mining vary so greatly that it is quite impossible to compare one mine with another, nor would it be just to ascribe defective drainage or ventilation in every case to the negligence of the operator. Doubtless it is just to do so in many cases, and the mine inspectors have done much in the way of insisting on more faithful observance of the law in these matters.

The inspector of the Fourth Anthracite District reports:

"In viewing the condition of the mines of this district, a general improvement becomes apparent in the methods of conducting the workings, in the production and distribution of the ventilation, and in the appliances used for haulage, hoisting and pumping. It is not many years since nearly every mine was ventilated by a furnace, but with the introduction of the fan, a machine much safer and more effective, the furnace, in a few years, was driven out of use and was superseded by it. Now every mine is ventilated by one or more of these machines, and each is producing from 60,000 to 250,000 cubit feet of air-current per minute, varying according to their size, running speed and the length of the air passages of the mines upon which they are located.

"Effective improvements have been also made in the manner of conducting and distributing the air currents. In former years the general practice was to conduct the current in one continuous stream through all the air passages of the mine, so that by the time it passed through the last half of the working places, it was so charged with noxious gases that it was not fit for respiration, and was exceedingly unhealthy to breathe. But at present, in every mine, the air is divided into a number of separate currents, or splits, each ventilating

a section having no more than 75 persons working therein, and in most cases a less number. By this method the aggregate quantity of air current is much increased without increasing the power producing it. Therefore it has proven to be the most economical method, as well as the most healthful and the safest for the workmen. A judicious system of splitting the air currents is now considered absolutely necessary, and its adoption has effected a very important improvement in the condition of all the mines.

"In many mines steam boilers were located under ground where it was necessary to have steam to run underground hoisting engines and pumps. The heat from the fires under the boilers was the cause of many disastrous mine fires, and in time all the boilers were removed to the surface and the mines are safer in consequence. After this, steam pipes were laid from the boilers on surface into the mines for the purpose of running the hoisting engines and pumps, and in most cases the heat radiating from the steam pipes had a detrimental effect upon the ventilation by heating the air to an unhealthful degree and causing it to become sluggish in its passage through the mines. This suggested the propriety of placing the hoisting engines for underground slopes on the surface and of having bore holes for the ropes to pass into the mine at the head of the slopes to hoist the cars. The invention of electric signals made it easier and cheaper, as it is not necessary to have separate bore holes, since the wires can be conducted through the shafts to any point required for signalling purposes. The removal of the large steam pipes formerly used to convey steam to the hoisting engines was a beneficial improvement in all cases, and they have been removed in all the mines of this district.

"The use of steam for running pumps has become a source of more or less annoyance in most of the mines, but the gradual introduction of compressed air or electricity will in time banish the steam pipes from the mines. The Kingston Coal Company, at their Edwardsville collieries, the Plymouth Coal Company at their Dodson colliery, and the Lehigh and Wilkes-Barre at their Nottingham colliery, are running their underground pumps with compressed air, and the Delaware, Lackawanna and Western Railroad Company at their Woodward colliery, run the underground pump with electricity. Thus, it will be seen that the condition of the underground workings of the mines is progressing continually toward a safer and better condition of things."

The inspector of the Seventh Anthracite District says:

"The general condition of the collieries in the district will compare very favorably with the condition at any previous time. This is largely due to the fact of the year 1892 having been a good coal year. The more steadily the collieries work, the more money can be spent in general repairs, and making substantial improvements, while on the other hand, dullness in trade and the consequent falling off in production, leads to a cutting down of expenses, which at times render the general condition of the collieries what they would not otherwise be."

The inspector of the Second Bituminous District reports:

"The mines are still being improved, and there is a larger volume of

air in circulation in them than there was last year, and all practical operators and mine officials fully realize the benefits they derive from complying with a good, common-sense law."

The inspector of the Sixth Bituminous District reports:

"The latter part of the year, 1893, has been unsually dull in the mining business. There are always certain repairs to be kept up in mines, whether working or idle, if they are kept in a proper condition for the health and safety of the workmen, but am sorry to state that at some of the collieries, repairs which are absolutely essential to be kept up have been very much neglected. The extreme dullness in the coal trade has, no doubt, caused a tendency in some of our mining people to let everything in the way of repairs at the mines run down, believing it to be economy; and to economize is certainly necessary in such times, but it is economy practiced in the wrong direction, and will be apparent in the course of a short time, as the evil effect of neglecting the general repairs of the inside work of a mine is so great, that is it not usually attempted more than once by the same person, as it proves to be a very expensive experiment.

"In permanent improvements at the mines there seems to be almost a cessation, yet there were a few collieries that put in rope haulage, that was contracted for in the early part of the year, and a couple of fans were erected for ventilating, to replace furnaces.

"Under the provisions of the new Mine Law, adopted May 15, 1893, there are quite a number of changes required in some of the collieries, and the promptness shown by a majority of the operators in complying is very gratifying. The most important change possibly in our non-gaseous mines, is the splitting of the air so as not to have more than 65 persons in one current, and to force the same through the face of all working places. This will be found somewhat of a difficulty, as the power in a majority of the furnaces in the shallow mines of the Bituminous region is inadequate for the work, consequently they will have to be replaced by fans.

"I expect to see considerable improvement made in the mode of producing ventilation upon the revival of the coal trade, as I am fully convinced that until better means than that of furnaces are adopted, the sanitary condition of the collieries will not be raised to the standard they should be for the health and comfort of the employes, nor to that expected by the originators of the Mine Laws.

"Quite a number of new mines were opened up in the beginning of the year, all of them adopting furnace ventilation. This was a mistake in several cases, if not in all, as they should have put up fans, which would be nearly as cheap in first cost, and they can be operated with less than one-half the expense that a furnace can, and give far better satisfaction in producing ventilation. Several of the furnaces alluded to will have to be replaced very soon, on account of being inadequate to produce the volume of air required for the mines, though not being in use much over one year.

"There is nothing more surprising to me than to see the tenacity shown by so many of our mining men to stick to the furnaces as ventilators as the advantage of fan ventilation is so plain in its efficiency and cost of running. But I believe that they are beginning to con-

sider this matter more thoroughly and for that reason I feel confident, as stated, that very great improvement will be made in the ventilation of the mines when an increase in the coal trade warrants it.

"Notwithstanding the deficiencies noted, I am glad to state that the general condition of the mines is gradually improving every year, and under the new law, when they have made the changes required by it, I fully expect to report a still further improvement in them, as a compliance with the law will undoubtedly increase their safety and sanitary condition."

The inspector of the Eighth Bituminous District reports:

"During the past year there were no serious violations of the mine law on the part of any of the operators. On account of the law being new, however, there were several cases in which attention of operators had to be called—more for explanations than reprimand. I am pleased to say that I find the operators as a rule very willing and ready to comply with the provisions of the new act. I am pleased, also, to say that the miners and other workmen in the mines are satisfied that they have an increased protection under this law, which the law of 1885 did not give them, and what is still better, they appreciate it."

The inspectors of the bituminous mines make detailed reports of the condition of the mines inspected by them from which a better idea can be formed of their condition, and whether the operators have been negligent or not in their duty. In the last reports of the bituminous mine inspectors of the second and third districts the ventilation of sixty-five mines is thus described: The number of those having excellent ventilation was 3, the ventilation of 18 was considered very good, 13 good, 9 very fair, 11 fair and 14 bad. With respect to drainage the condition of two was reported as excellent, 19 as very good, 18 as good, 6 as very fair, 10 as fair and 3 as bad. Of course, one inspector's judgment may differ somewhat from that of another, and therefore no classification or comparison of the mines can be very exact. Of late years especially operators have shown greater willingness to observe the requirements of the law. We suppose that one reason is that having conformed to them from time to time it is less expensive to do whatever may be necessary to keep within their spirit and purpose.

We may next inquire whether or not accidents which cannot be ascribed to the negligence of any one, are on the increase. Of course, mines vary greatly in degree of safety. Some are much more gaseous than others. A mine may be examined in accordance with the requirements of law before the miners begin work in the morning, and may be found entirely free, or nearly so, from gas. In a short time, however, a large quantity of gas may be discovered,

which has accumulated perhaps in consequence of a reduction of the air currents. Various inventions have been applied from time to time to discover the presence of this dreaded enemy, but the injury is often caused too quickly after the discovery of gas for any kind of machinery to be effective in giving warning. In some mines the gas accumulates in the upper portion of a chamber slowly and in the most deceptive manner, until fianlly enough has collected to cause an explosion whenever a light is applied to it. Doubtless in these cases its presence could have been ascertained by a more careful examination, but in other cases there is no mode of discovering its presence until it is immediately followed by an explosion. Some veins seem to contain very much more gas than others, and therefore are more dangerous to operate. Many of the injuries and losses of life arising from this cause are purely accidental. A mine explosion is regarded with more horror than a succession of accidents that in the aggregate are far more destructive to health and life. Nevertheless, they do not strike the public mind in the same manner because they have come separately and are less horrible in their nature.

We have considered in a brief way two classes of accidents, those caused by the negligence of operators, arising from their disregard of the regulations imposed on them, and also of another class which may be regarded as purely accidental, or not caused by the negligence of any one. We now reach the third class of accidents, in which the miners, in a great measure, are responsible for them. They arise either from lack of knowledge or from carelessness. Some of the inspectors assert that accidents are more numerous among those miners who have the least education and therefore have the least fitness for their work. On the other hand, other inspectors assert that even the most intelligent miners knowingly incur the risks that surround them. In other words, they become bold and careless in the presence of constant danger. For example, when dynamite was introduced into the mines it was handled with the utmost care, every miner seemed to be afraid of it, but it is no longer a strange thing notwithstanding its dangerous character, they often put it within their shirts in order to warm it or put dynamite caps in their mouths, well knowing that the slightest pressure would cause their explosion.

The fatalities in coal mining since the inspectors began to report them are given in the following table:

## *Fatalities in Coal Mining.*

| Years. | Anthracite. | | | Year. | Bituminous. | | |
|---|---|---|---|---|---|---|---|
| | Number of fatal accidents. | Number of tons of coal produced per life lost. | Number of tons of coal. | | Number of fatal accidents. | Number of tons of coal produced per life lost. | Number of tons coal mined. |
| 1872, | 229 | 91,906 | 21,046,662 | | | | |
| 1873, | 266 | 85,390 | 22,713,908 | | | | |
| 1874, | 262 | 82,272 | 21,555,279 | | | | |
| 1875, | 238 | 88,623 | 21,092,345 | | | | |
| 1876, | 228 | 86,824 | 19,796,081 | | | | |
| 1877, | 194 | 114,877 | 22,286,151 | | | | |
| 1878, | 189 | 99,670 | 18,837,630 | | | | |
| 1879, | 262 | 106,765 | 27,972,677 | 1879, | 51 | 281,027 | 14,332,371 |
| 1880, | 202 | 124,098 | 25,067,848 | 1880, | 48 | 357,696 | 17,169,448 |
| 1881, | 273 | 111,725 | 30,501,017 | 1881, | 55 | 395,709 | 21,764,024 |
| 1882, | 292 | 107,264 | 31,301,276 | 1882, | 94 | 223,839 | 21,040,905 |
| 1883, | 323 | 104,344 | 33,703,222 | 1883, | 54 | 294,597 | 15,908,270 |
| 1884, | 332 | 98,076 | 32,561,374 | 1884, | 105 | 195,743 | 20,553,090 |
| 1885, | 312 | 109,298 | 31,623,527 | 1885, | 72 | 286,774 | 20,647,720 |
| 1886, | 279 | 124,658 | 34,777,618 | 1886, | 74 | 367,878 | 27,222,943 |
| 1887, | 316 | 117,890 | 37,648,997 | 1887, | 84 | 356,755 | 29,967,394 |
| 1888, | 364 | 114,277 | 41,596,971 | 1888, | 89 | 423,845 | 37,722,279 |
| 1889, | 385 | 101,231 | 38,973,949 | 1889, | 105 | 324,048 | 34,025,054 |
| 1890, | 378 | 106,059 | 40,090,355 | 1890, | 146 | 279,044 | 40,740,521 |
| 1891, | 427 | 103,796 | 44,320,966 | 1891, | 226 | 185,275 | 41,872,210 |
| 1892, | 396 | 115,501 | 45,738,373 | 1892, | 133 | 350,199 | 46,576,576 |
| 1893, | 455 | 103,691 | 47,179,563 | 1893, | 131 | 331,465 | 43,421,898 |
| 1894, | | | | 1894, | | | |

To develop our subject more fully, the principle accidents resulting in the loss of life or injury may be mentioned. They are the following:

### CAUSES OF ACCIDENTS.

By falls of coal or bone.
By falls of ordinary roof rock.
By falls of bell-shaped rocks and sulphur balls.
By falling down shafts.
By premature explosion of blasts.
By explosions of gas.
By explosions of powder.
By cars inside.
By cars outside.
Kicked by mules.
Shot through pillar.
Struck by flying coal from blast.
Miscellaneous inside.
Miscellaneous outside.

The most frequent causes of accident are from falls of coal, or roof, or rock.

Before describing these the question of a miner's competency for his work may be considered. Very often he is employed, though not having a proper knowledge of the work he is intended to perform. In the early reports inspectors complained that persons in the neighboring vicinity of mines were often employed, farmers and others who had no practical knowledge of mining. The employment

seemed simple enough, and with little, or no instruction they were willing to engage in this hazardous employment. Numerous accidents happened in those days that were ascribed wholly to the ignorance of the miners. They mined in the dark in more senses than one. Perhaps foremen in too many cases were either incompetent or neglectful of their duties.

This class of persons is no longer employed in the mines, but another class of ignorant people has taken their place, who are usually foreigners. Many of them are Huns, who have but the slightest knowledge of the business. In the report of Mr. Thomas for 1893 he declares that the crowding of the mines with Hungarian labor is responsible for fifty per cent. of the fatal and about thirty per cent. of the non-fatal accidents. "One remarkable circumstance," he says, "has come to my notice in this particular, namely, that we do not reap the harvest of death immediately on the entrance of these people into the mines, but after they have been working in them from one to five years. At first they are afraid, and are in consequence very careful but when they have earned money enough to buy a suit of American clothes, and can afford to cast away their horsehide boots and their homespun trousers, when they discard the black clay or wooden pipe, and go along puffing an American manufactured cigar, when alcohol is no longer good enough for them, and they must have the 50 cents per quart "red eye" whiskey, then they become independent and saucy enough to say to the mine-boss or inspector, "me know," "me dig coal for one year," "two year," "three year," "me take care myself." "he no come down." "me shoot him down," and many other such expressions, but the fact remains that they are not capable of taking care of themselves as men who have been raised to the business of mining coal, neither are they as easily disciplined as other people."

Other inspectors also corroborate this statement. Of course, the foreigners employed in the different mines vary in number and efficiency, but unquestionably a great deal of ignorance prevails among them when they begin, especially among the Huns. In Mr. Blick's report for 1892 he says:

"That the number of fatal and serious personal injuries are on the increase in that district, and they are due very largely to the number of foreigners now employed in the mines. These men do not understand our language and know nothing whatever about underground work or the dangers connected therewith, and are utterly incompetent to protect themselves therefrom, and in mines generating much explosive gas, a general ignorance or wilful disregard of the impending dangers by a considerable number of the employes is a standing menace to the safety of the whole. If some of the mine officials happen to visit them at their working places at the moment of imminent danger they can instruct them and insist upon the application of proper safeguards, otherwise the chances are that they will be killed or injured. And this class of labor is largely on

the increase in the mines of this vicinity, and is likely to continue so by reason of the city of Pittsburg being the point of distribution for the consignments of ignorance and squalor which are promiscuously dumped upon our shores. Under such conditions we cannot hope for much, if any, decrease in the accident list for some time to come."

In Mr. Roderick's report for 1893 he remarks:

"The number of persons who lost their lives while following their daily occupations in and about the mines of this district during the year was 51; and 96 were more or less seriously injured, making a total of 147 accidents.

"Of this number, 92, or nearly 62.6 per cent., occurred to persons among the nationalities who are supposed to have a far better knowledge of the methods of mining than the nationalities among whom the other 55 casualities occurred. Among the former class are included Americans, Irish, English, Welsh and Germans, and among the latter the Slavish, Polish, Italian, Austrians, Hungarians and Russians, whose knowledge of mining is believed to be, and undoubtedly is, to some extent—among the class of workmen that come to this country—far inferior to the knowledge of the former.

"The number of workmen of the first mentioned nationalities in and about the mines of this district is somewhat greater than that of the latter, yet the proportion of accidents occurring to the English-speaking workman is nearly in the same ratio to those occurring to the foreign element.

"Looking at this matter in the light of justice and fairness, we must consider that the Hun, Pole, Slav, Austrian, Italian and Russian workmen, are, as yet, mostly employed as laborers by English-speaking miners, and who, therefore, are directly responsible for their safety while they are working in their chambers with them, and when we pause to realize that of the twenty laborers who were killed this year while loading coal, twelve of them were working for experienced, English-speaking people, it goes to show that there is as much, if not more, thoughtlessness, oversight, neglect of taking proper precautions, recklessness, indifference to danger, and contempt for it among the intelligent and practical miners as there is among the less informed people of foreign lands, against whom there are so many false assertions of stupidity made by various people in this, as well as other localities."

Mr. McDonald, in his report for 1893, remarks:

"The condition of the mines is about the same as in last report in regards the general workings. The air being somewhat improved in a number of collieries by new ventilators having been erected, taking the place of the old one, which did not give a sufficiently large volume of air. I am sorry to have to report an increase in the death list of this year, there having been 64 deaths from various injuries, which are enumerated in the tables of this report. Eleven of the above deaths were caused by explosions of gas. I find most of those explosions could have been avoided had the victims regarded the orders given them by those in charge.

"There are not only a few shafts in his district which do not give off

more or less carburetted hydrogen gas, while some of them give it off to an alarming extent, necessitating large volumes of air to dilute and render it harmless. Therefore, it behooves all to pay the strictest attention to the orders given them, and not take the risk which I find is the cause of nine-tenths of the accidents.

"I would say, in conclusion, that the majority of the miners who have to be contended with to-day are not the competent miners of former years; men who were raised from boyhood through all the different grades of mining and timbering, which becomes necessary to make a good and careful miner. As two-thirds of the miners and laborers employed in the mines at present are late arrivals from Poland, Italy and Hungary, who have succeeded to the above employment, and not having those qualifications for a miner which are requisite for them to have before they can become safe and competent workmen."

One more extract may be given from Mr. Blick's report for 1893:

"The number of tons of coal produced per life lost is less than that of last year, and the same may be said in regard to the non-fatal injuries, and while we deeply deplore this increase in the loss of human life and personal injuries, yet it is just what we had anticipated, for when we take into consideration the very large number of persons employed in the mines of this section who are incompetent to detect or to guard against the ordinary dangers surrounding the miners' occupation, it is not surprising that fatalities and personal injuries are numerous; and it is very difficult to instruct them as to what they should do to secure their own safety, because they are unable to speak our language and very few of them try to learn it, for in very many cases they are only here for the purpose of saving a few hundred dollars and then returning to their native countries to live upon the money earned in American mines and exported to foreign lands. But where such people are employed in our mines, common humanity should be a sufficient incentive for the parties employing them to use more than ordinary efforts to protect their lives and limbs while so employed. The prevailing idea entertained by a large number of people, to the effect that a person who has never before seen a coal mine, can be turned loose in one and in a few weeks become a skillful miner, is a fallacy; for we have learned by experience that it requires years of practice before a man can arrive at proficiency in coal mining."

Mr. McMurtrie, in his report for 1891, says:

"The number of fatal accidents for the year was fifty-six, being an increase of seventeen over the previous year. As in former years fully 60 per cent. of both fatal and non-fatal accidents have been caused by falls of roof and sides, mine cars and machinery.

"I am compelled to say that a large number of these accidents, both fatal and non-fatal, could have been averted had proper care been taken on the part of the unfortunates themselves. Some of the accidents occurred through a lack of discipline on the part of the foreman in charge in allowing men to work in places which were not properly timbered."

Mr. Gay, in his report for 1891, says:

"It is gratifying to state that the condition of the mines in general

is steadily be raised to a higher standard in point of safety, and more particularly in the sanitary condition, notwithstanding the deplorable increase in the loss of life during the year. Had it not been for the two disastrous occurrences that resulted in the deaths of eleven persons, the general accident list that usually makes up a very large proportion of our mining casualities, would have made a much more favorable showing.

"As is frequently shown in these reports, a very large percentage of the accidents are due to the recklessness of the employes themselves, which is true without any question of doubt, but the eleven victims above referred to do not come under that category, for I am of the opinion that neither one of the victims had contributed toward the occurrence that cost the unfortunate men and boys their lives."

Mr. Adams, in his report for 1891, after describing a number of accidents, adds, "in these accidents 62½ per cent. of them were avoidable by using ordinary care."

Mr. Thomas, in his report for 1891, remarks:

"Of the 14 fatal accidents only one was what may be considered purely accidental, 7 of them might have been prevented by the exercise of ordinary care and precaution, while the other 6 were either from gross negligence or foolhardiness. One of the unfortunates was fatally burned by the explosion of a keg of powder while attempting to open it with a pick. This should be a warning to those who are in the habit of handling powder in such a reckless manner. Another met his death by an equally foolish practice, namely, that of tamping dynamite in a hole, as will be seen by reference to the account of this accident in another place. This man had already eleven sticks of dynamite in the hole and was forcing these back with an iron bar in order to make room for three other pieces he had ready to put in. In this connection I desire to call attention to the fact that dynamite should not be handled like black or common blasting powder, it is not exploded by squibs or fuse, but by detonators or caps and the shock thus occasioned sets off the explosive. The same result may be obtained by solid tamping of the explosive in a hole, as in the case here spoken of, whenever the force of the remming approaches the force contained in the detonator then the explosion is sure to occur and a man can easily exert the amount of force by the use of an iron rammer. The tamping of dynamite should therefore be avoided, even with dirt after the explosive is put in the hole, for all that is necessary, is to put a few hands full of dirt against the explosive very lightly or if practicable fill the hole with water; if the hole however be for instance two inches in diameter and the stick of dynamite one and one-half inches and the greatest resistance be opposite the extreme end of the hole, and it is desired to have the explosive compact at that point, the cartridges may be broken and the mixture pushed into the hole by the use of a stick or something limber that ramming may not be necessary.

"Some other accidents were caused by equal recknessness in other directions. One described in the table of accidents is of an old miner who had taken coal off his rib or roadside to the extent of exposing 144 square feet of "bone coal" fully 13 inches thick, and under this,

he continued to work with his two boys without the use of a prop, notwithstanding that one side, 18 feet in length, was what is called "loose end," and in reply to a warning given him by the track-layer just 15 or 20 minutes previous, he asserted that it was so safe that he could sleep under it. In this case his oldest son was killed and he himself injured. Such carelessness as this is criminal and but for the fact that the poor man was sufficiently punished by the loss of his son he would have been tried for the life of the boy, and so in the face of so many accidents it is astonishing that men do not take better care of themselves."

In an unusually interesting report on the condition of mines by Mr. Roderick for 1892, he remarks:

"It is a well known fact that persons who are daily, and almost hourly exposed to danger, become so accustomed to it as to regard it with an indifference approaching contempt. It is this consummate contempt of danger on the part of many miners, that leads them to take so many uncalled for, utterly unnecessary and frequently fatal risks, of which a description is herein given. It is frequently noticed that where no slips are visible in the top coal, it is left to overhang for a distance of ten, fifteen or possibly twenty feet, more or less, without a prop to support it at the other edge; a shot is fired in the bottom bench which cuts a slip, that runs up into and through the top coal; soon after the shot has exploded, the miner who may not have enough loose coal to load the "next car" hurries back to the face of the breast to see how the hole "cut." In his haste he forgets, or does not think it necessary, to first examine the coal above him, inasmuch as it was safe before he fired the shot, and proceeds to work; when, without any warning, the top coal falls upon him with fatal results. In some places the top coal may be "dirty," that is, full of streaks of rock and bone, or it may be the "buck" which is not sent out but "gobbed" in the mine. The miner who may be working such a place may have a car of bottom coal ready to load will make the miner's familiar remark to his laborer, "That the top is getting bad and will not stay up much longer, so we'll blow it down after loading the next car." But while the car is being loaded, the top coal falls of itself and kills one or both.

"Then again it is often observed that the miners, after trying for a long time to pry down a bad piece of coal or rock, and not succeeding as easily as they thought, conclude it was mistaken judgment on their part to think it was unsafe, and so abandon their efforts and proceed to work under it. When, in a short period of time than it takes to record the fact, it falls and kills the miner or his laborer.

"Another somewhat prolific cause of fatal casualities, is procrastination in regard to propping. Oftentimes when a miner knows very well that a prop should be "stood" in a certain place to secure the roof, he will put off standing it until he has "loaded another car," or has "drilled and fired another hole," or as it would appear, until some other seemingly more important duty than standing a prop to ensure his own safety has been performed. Very few accidents occur where there is a very bad roof, for in such place the miner is always on the alert for danger, and keeps his props well up to the face, but, on the other hand, where the roof is apparently good, the propping is neg-

lected, falls occur, and very severe and oftentimes fatal accidents are the result."

Much more might be added in the way of showing the carelessness or indifference of miners to the dangers surrounding them. It is a repetition of the old story, they become neglectful of their lives in the presence of constant danger. It is a question whether more injuries, fatal and non-fatal, occur through ignorance or through carelessness. Notwithstanding their disregard of danger, the law should not be less vigilant in prescribing and enforcing regulations concerning the fitness of miners to exercise their employment. The fact that even most of the skillful miners run great risks, for which they often pay the penalty by the loss of life, is no excuse for employing men who do not understand the risks of mining. We are sure that the mine inspectors are desirous of enforcing all the regulations that have been prescribed for the benefit of the miners. New regulations are constantly prepared and enforced for their safety, based on experience. In their reports some of these regulations are given, showing clearly enough the spirit and determination of the inspectors to do everything within their power to lessen the risks attending coal mining.

Occasionally, however, some of the inspectors complain that the bosses and superintendents are incapable and unfit for their duties. This would seem to be an unpardonable neglect on the part of those who employ them. Mr. Evans, in his report for 1892, after remarking on the progressive spirit manifested in mining, which he attributes to the law making it obligatory on all men having charge of mines to hold certificates of competency, adds, "I am very reluctant to believe that there is any one thing that will do much toward improving the mines as increased technical knowledge of the theory and practice of mining by those in charge. We can make all the laws governing mining, but if we do not educate the people who have charge of the mines, the laws will not have the desired effect."

Other inspectors on various occasions have made similar statements concerning the increase of incompetent miners, and also the increase of the number of accidents arising from their employment. On the other hand, no fact is more frequently reiterated by the inspectors than this, that even the most competent miners often assume needless risks. Perhaps they have been notified just before the occurrence of an accident of the dangers confronting them; of the presence of gas, or more frequently, perhaps, that the roof of the chamber in which they are working is in a dangerous condition. The inspectors are constantly describing accidents arising from a known neglect on the part of the miners to attend to their safety. It may be that the danger is discovered just before leaving for the

day, and the miner thinks that he can complete his task in safety. But he fires a blast, breaks down a quantity of coal, or makes a movement of some kind, it may be very slight, and rock or loose coal, or a portion of the roof itself falls and he is injured, or it may be killed. We could fill a volume with a description of accidents of this character drawn from the reports of the mine inspectors. A few extracts, however, may be added. Mr. Jenkins, in his report for 1890 remarks:

"I desire to call attention to the fact that last year nearly all of the fatal accidents happened to old miners, but this has changed, as sixty-five per cent. of the fatal accidents this year were 'greenhorns' or men who had little or no experience in the mines, and from present indications, this class of men will be our future miners, as many of our old miners are seeking other employment, therefore great care will be required with the new men until they become thoroughly acquainted with the dangers encountered in mining. I also desire to call attention to the fact that there were four accidents less this year than last year, three fatal and one non-fatal, one of which was to a person not employed at the mines, but who after being warned not to pump on the "larry" on the coke ovens did so and was fatally injured.

"After a careful investigation of all the accidents, I have no hesitanary care had been exercised, and the rules of the mines strictly tion in saying that many of them could have been prevented if ordi- observed."

Mr. Adams, in his report for 1890, describes three fatalities that could have been prevented by exercising ordinary care. "They could only have happened," he remarks, "through the grossest negligence on the part of the miners." Their names were Fox, Hetrick and Kunsleman. He thus describes the manner in which they met their death:

"Mr. Fox knew that the slate which fell upon him was very loose and he was also reminded of this fact by Mr. Buck (a fellow miner), but rather than heed the friendly advice given him, or give the time necessary to take the loose material down to insure his own safety, he adopted the fatal course, for it would seem that for the sake of securing a trifling pecuniary gain he was willing to risk his life. Mr. Hetrick simply courted death. He had fired a shot in the mined coal which failed to bring it down, although the hanging material was left very loose and badly shattered, and without taking any precaution at all (according to the evidence of his son, who was working with him) to find out the condition of the hanging mass he sat down in front of it and commenced mining. He had just begun to do such work when about seven tons of coal fell, completely burying him. According to the evidence, he did not even sound the coal to find whether it was ready to fall or not. Kunsleman lost his life by violating the mine rules in reference to the use of powder. Had Mr. Erb used the ordinary precautions incident to mining, such as proping the roof sufficiently, he certainly would have been living to-day. Mr. Lucas' case was different from the others as he had used all nec-

essary precautions to insure safety. These sad occurrences only emphasize the remarks made in some of my former reports in reference to the enforcement of more stringent rules for the maintenance of a proper system of discipline among the employes of the mines."

Mr. King in his report for 1890, says: "Two-thirds of the fatal accidents in this district were the cause of the lack of ordinary caution and vigilance on the part of the victims themselves, there being nineteen deaths caused by falls of roof and coal. A large number of the non-fatal accidents were due to carelessness—about 50 of the 85. I have labored constantly to reduce the number of accidents to a minimum, but apparently without meeting success."

Clearly, therefore, stricter regulations should be prescribed and enforced concerning incompetent miners. If this is not done, then those who employ them must be regarded as sharers in the consequences of employing them. One would think that the employment is so hazardous no operator would feel comfortable in sending persons into mines unless they understood the dangers to which they were exposed. But if they are competent and knowingly assume risks, they can blame only themselves. But their disregard of danger is no excuse for employing incompetent miners, or for neglecting any provision of law relating to their safety. Of course, the causes of accidents vary greatly from year to year, and in different localities. Sometimes the number of purely accidental losses is much larger than at other times. Occasionally there is an explosion, costing many lives, and for which no one is to blame. Thus the statistics vary much in all these particulars, but one fact that stands out more prominently than any other in the reports of the inspectors is that the chief cause of injury and loss of life is the carelessness and unpardonable negligence of miners; their deliberate disregard to follow the orders or warnings given to them, or the knowledge they possessed themselves.

Another illustration of the unwillingness of miners to take proper precaution concerning their safety may be found in the report for 1894 of William Stein, Inspector of the Sixth Anthracite District. Mr. John Veith, general mine superintendent of the Philadelphia and Reading Coal and Iron Company, gave peremptory instructions that where gas was given off to any extent locked safety lamps must be used. How have the workmen regarded this order? Says Inspector Stein: "The workmen have given evidence of their disapproval of these orders to the extent that they will conceal their miner's lamps about their person and light them after reaching their places of work. Two lives were sacrificed during the year from this practice, and in order to prevent a repetition of an explosion from this cause, it was even deemed necessary by the Mine Foreman to search these men for naked lamps, and he took dozens from their

persons. About five years ago I visited a colliery in my district; Mr. Veith happened to visit there also and the question of using safety lamps absolutely at this colliery was talked over, and Mr. Veith gave instructions to the Foreman not to allow the use of naked lamps. However, these instructions were violated during the year, which I am sorry to say caused the death of three men."

We will now proceed to describe more in detail the chief causes of accidents that happen to miners The first of these is from falls of coal, or of a portion of the roof. The nature of these accidents is described in many of the reports.

"Oftentimes," says Mr. Roderick in his report for 1892, "when a miner knows very well that a prop should be 'stood' in a certain place to secure the roof, he will put off standing it until he has 'loaded another car,' or has 'drilled and fired another hole,' or as it would appear, until some other seemingly more important duty than standing a prop to ensure his own safety has been performed. Very few accidents occur where there is very bad roof, for in such a place the miner is always on the alert for danger, and keeps his props well up to the face, but, on the other hand, where the roof is apparently good, the propping is neglected, falls occur, and very severe and oftentimes fatal accidents are the result."

In the report of the same inspector for the following year he remarks:

"It is a remarkable fact that for the want of a realizing sense of the foolhardiness of taking unnecessary risks, many persons in and around the collieries lose their lives every year, and one of the most fruitful causes of accidents from falls of coal and roof, is the almost mad haste and hurry on the part of most miners "to cut enough coal for the shift and get out early.

"It is owing to this unnecessary haste among miners that they neglect to stand props when it becomes necessary, in order to secure safety; that they frequently stand props without cutting a 'hitch' for them in the 'bottom,' and thus cause them to be easily 'knocked out' by flying coal from a shot; that, after a prop has been displaced, they proceed to replace it under a dangerous piece of roof without first making a proper examination of the same; that they rush back after a shot has been fired and begin to work under a dangerous roof before the smoke of the blast has had time to clear; that if a squib is a little longer burning than usual they hurry back to the face just in time to receive the full contents of the shot; and last, but not the least frequent by any means, is the risk they take of going back too soon to a hole that apparently has missed firing, which is caused, oftentimes, by a defective squib, but more frequently by small coal or dirt falling into the needle hole, and thus for an instant retarding the progress of the squib on its way to the powder."

Men are constantly told that additional props are required to protect them from falls of coal, but rather than delay their work the

risk is incurred. As we have remarked, this is the most prolific of all the causes of injuries. It would seem that in most cases the dangers arising from this source could be prevented by the exercise of a little attention on the part of the miners. The inspectors, bosses and foremen are constantly on the lookout for dangers of every kind and warn miners against them, but they are often disregarded. Proof of this may be found in every inspector's report. Occasionally, however, a piece falls or slips from the roof, often of a bell-shaped character, without any warning. It may seem to be firmly in its place, but by constant explosions it has been loosened and falls. Yet these are few in comparison with the entire number whose origin can be easily enough discovered by the exercise of proper care.

Mr. Williams in his report for 1893, remarks that:

"The number of accidents in the coal producing collieries was 77 and the non-fatal accidents 221. There is nothing new to state regarding these. The greater number occurred, as usual, from falls of roof and coal. Forty fatal and 65 non-fatal were caused by falls. The miner and his laborer are all the time while at work in danger from falls, either of the roof or of the coal at the face of their working place. Where the top is really bad and dangerous, accidents rarely occur, because the workmen are at all times on the alert watching and securing their places. But it is in places where no danger is apprehended that the most of the accidents from falls of roof occur. As to the accidents from falls of coal, the greater number occur because the miner is too eager to return to work after blasting, or does not take proper precaution to examine the face, and ascertain whether or not there are dangerous pieces of coal hanging before beginning to work, and accidents take place frequently because the miner does not stand in a safe position when he has to pry loose coal down; the coal, when falling, either strikes or rolls upon him and causes serious injuries.

"The number killed or fatally injured by explosion of fire-damp was 22, and 46 others were more or less injured. By using the precaution that is required by the law, nearly all of these could have been avoided.

"What is needed is that no idle place shall be entered with naked light unless it has ben examined first with a safety lamp, and that all working places shall be examined with the safety lamp after each brief cessation of work. If this precaution was at all times taken, the presence of fire-damp would be discovered and care would be exercised not to ignite it. This would probably reduce the number of injuries from explosions of fire-damp to one-fourth of what they are.

"The number of fatal accidents caused in various ways by mine cars was 12, and of the non-fatal ones, 36. The greater number of this class of casualties are the result of the carelessness of the boys employed to haul and to move the cars.

"By explosions of powder and premature blasts there were 4 fatal and 27 non-fatal accidents. Some of these occurred through the care-

less handling of powder; others because the victims made the match too short when firing blasts, so that the blasts fired before they had time to get away, and the others by returning, believing the squibs had missed fire and the blasts exploding when they were approaching."

Another cause of accident is in riding on cars contrary to law. A great variety of accidents arising from this cause are specified in the reports of the inspectors. In Mr. Thomas' report for 1891 he remarks that "the accidents from moving cars have increased alarmingly." Mr. Stein's report for 1893 contains much confirmatory evidence.

Fire damp is another cause of injury and loss of life. Perhaps it is more difficult to detect its presence than any other danger. Therefore, the accidents attributed to fire-damp are more excusable than those arising from any other prominent cause. It is true that sometimes its presence may be detected, but often this dreaded enemy appears too quickly to be successfully escaped. Mr. Williams, in his report for 1892 makes some remarks on this subject that may be fittingly used here.

"The most excusable classes of accidents are those which occur by explosions of fire-damp, except perhaps, those which occur from explosions of powder and blasts. In a gaseous mine where fire-damp is profusely exuded from every interstice of the coal, it requires extraordinary care to work and blast without igniting the gas-feeders, but in these cases an explosion rarely occurs, and injuries to the workmen rarely take place. In these places every precaution is exercised to prevent accidents, and they are meritoriously successful. Accidents from explosions of fire-damp mostly occur because the ordinary care and practice is neglected or overlooked. In most cases during the year 1892, accidents from the ignition of fire-damp happened where it was either known to be, or in places where every experienced person might reasonably expect it to be, and yet the ordinary practice of making an examination with the safety-lamp was neglected.

"It is remarkable how frequently men will trust that a place is free of fire-damp, even when they doubt it, and rather than take the trouble of making an examination first with a safety-lamp, they will go on with naked lights hoping that it is safe. Many are burned more or less in this manner.

"One serious accident occurred because an accumulated body of fire-damp ignited from a dynamite blast in a rock tunnel. On other occasions two fire-bosses and one mine foreman with others, were either killed or fatally injured, while the usual morning examinations were being made. These accidents are each explained in the proper tables of this report."

The last cause of injury or death to be noticed relates to explosions of gas. These often occur by using an open light, although the law is very strict on this subject. The law requires that the

mine foreman, or his assistant, shall make a careful examination every morning of the working places and traveling roads, and all other places where the safety of the workingmen is imperiled before they enter the mines, and such examinations shall be made with a safety lamp three hours before beginning work. Notwithstand- this plain provision of law, injuries occur from carrying naked lamps. It is the possibility of an accumulation of gas at unexpected points that makes the examination first with a safety lamp so necessary, and in no case should an open light be carried until the true condition of the mine has been ascertained. Nevertheless, accidents, fatal and non-fatal, are reported every year in consequence of neglecting this precaution. In the report of Mr. Williams for 1892 the explosions from this cause are described at considerable length. To this report the reader is referred for a more complete consideration of the subject.

Reference, however, may be made to the report of Mr. Stein for the same year. Some instances are given by him that are worthy of special notice.

He says, "that of the 54 fatal accidents that occurred during that year only 19 of them could be called purely unavoidable. Four lives were sacrificed by premature explosions. In other words, these men went back to the shot before giving it time to explode and met death. There were 7 deaths from explosions of gas and all were caused by the absolute carelessness of the victims themselves. Some of them, he says, were the most skilled miners in the district. A review of the other cases may be noticed. Nine lives were lost by jumping on cars, and by going on the high side of the gangway instead of the low side, whereby the cars could not pass; 9 were killed by falls of coal; 2 by machinery on the surface and 4 from miscellaneous causes, such as a miner firing a shot without giving notice to his neighboring workmen. He concludes by saying that these 35 deaths were caused by carelessness, and he repeats a remark made in former reports, that accidents would be fewer if miners and others engaged in and about mines would cease taking risks that so often result in loss of life.

"I am pleased to report that the condition of the collieries in my district has been considerably improved in regard to increasing the safety of the lives of those working in and about them, and there is no doubt but that the increased vigilance during the year has been the means of reducing the number of accidents. I notice that in nearly all of the collieries additional assistant mine foremen have been employed, whose duties are to visit the workmen as often as practicable, and give suggestions by which those under their charge may avoid taking unnecessary risks. Although the number of colliery officials has been increasing with a view to increase the safety of life and property, I find of the fifty-four fatal accidents, only nineteen of them could be called purely unavoidable. For instance, four lives were sacrificed by premature explosions; this means that those who were killed went back to a shot before giving it time to explode.

Nine lives were lost by jumping on cars and by getting on the high side of 'gangway,' instead of the low side, to allow cars to pass. The seven deaths from explosions of gas, were all caused by the absolute carelessness of the victims themselves, some of them being the most skilled miners in the district. Nine were killed by falls of coal and roof, two by machinery on surface, and four from miscellaneous causes, such as a miner firing a shot without giving notice to his neighboring workmen, or not retreating for enough away, when about to fire a blast. These thirty-five deaths I say occurred by the carelessness of the victims themselves, and as I have stated in my former reports, we would have fewer accidents if the miners and others engaged in and about the mines would cease taking risks which so often result in loss of life."

These are the principal causes of accidents. In the tables, however, other causes are mentioned. Enough has been said, we think, to give the reader a pretty good idea of the risks of mining, of the number of accidents and their causes. Several conclusions are evident First, however efficient a mining law may be its enforcement is absolutely essential to diminish the loss of life and injury to the body. It would seem from the reports of the mine inspectors that while some operators disregard the law, in general they evince a growing spirit or willingness to conform to its provisions. Nevertheless, the reports contain some cases of disobedience every year in which the inspectors have been obliged to appeal to the courts. First of all, therefore the law should be enforced.

Secondly, miners should be competent to perform their duties. The law now requires that they should be examined and that none to whom a certificate of competency has been denied should be employed. The object of this law was unquestionably proper, but its administration, so the inspectors assert, has proved a disappointment, in consequence of the failure of those having charge of examinations to perform their duties in a proper manner. They declare that certificates are rarely, if ever, denied to any applicant. Before this law existed inspectors could exercise more authority over incompetent or careless miners than they can now, for armed with these certificates inspectors no longer feel warranted in seeking the removal of miners who have clearly shown their unfitness for their employment. Either these examinations ought to be conducted in a thorough manner, as the law intended, or it should be repealed and the inspectors be endowed with more authority to suspend or remove incompetent men.

Thirdly, it would seem from this review of our mining experience that after all the most important thing is to prevent competent miners from knowingly and unnecessarily risking their lives as well as the lives of others. What shall be done in such cases? Warnings are often unheeded. Again and again are miners told what to

do, but neglect the plainest and most obvious requirements. The suggestion has been often made by inspectors and others that when miners clearly show a disposition to disregard orders given to them they should be dismissed from employment. This seems a harsh remedy, especially when a miner is married and has a large family, but would not this prove a more powerful preventive than any other? If a miner knew that the penalty for disobeying an order for his protection and those around him would be loss of work in any mine for a specified period, this, we believe, would be effective to restrain his carelessness and rashness. Surely, nothing would be lost by making an attempt to enforce such a regulation. As the uniform testimony of all the inspectors is that the majority of accidents arise from the carelessness of the miners, if this provision proved effective the diminution would be enormous. It must also be remembered that miners by disobeying orders given to them not only imperil their own safety, but also the safety of those around them. If they have the right to do as they please concerning their own lives, they have no right to imperil the safety of others. The reports are filled with accounts of men who have been warned again and again, but who did not heed the warnings given to them.

Of course, the business of mining is hazardous and injuries will be sustained springing from unavoidable accidents, but so far as they are the result of carelessness and negligence the State has a clear duty to perform in the way of lessening them. The present law in most regards seems to be a wise one, and the operators generally are sincerely desirous of regarding it, especially the larger and more successful ones. After all, as we have already remarked, the greater number of accidents arise from the carelessness of the men themselves, and it is evident that more severe regulations must be made concerning their conduct, especially in the interest of those who are imperiled by their conduct.

# INDEX.

Page.

A. WOMEN IN INDUSTRY:
- Difficulties encountered, ..... 2
- Method of obtaining information, ..... 1
- One great complaint, ..... 4
  - A notable exception, ..... 6
  - The law affecting, ..... 4
  - The only apparent remedy, ..... 4
- Remarks of women concerning their employment, ..... 25
- Report from women employed:
  - Philadelphia, ..... 64
  - Pittsburg, ..... 115
  - Luzerne county, ..... 143
  - Lackawanna county, ..... 151
  - Dauphin county, ..... 189
  - Lycoming county, ..... 205
- The Women's Christian Association of Philadelphia, its object and its help to women, ..... 15

B. BUILDING TRADES:
- Character of the investigation, ..... 1
- Effect of machinery, ..... 29
- Highest individual wages from 1890 to 1894, ..... 3
- Industrial school, or apprenticeship, ..... 5, 18, 357, 446
- Number of buildings erected in Philadelphia, 1890 to 1894, and their cost, ..... 19
- Store orders, ..... 32
- Strikes, ..... 28
- Table of non-employment by months, ..... 20
- Individual returns showing prevailing wages, lost time, etc.:
  - Beaver county:
    - Carpenters, ..... 234
    - Stonemasons, ..... 248
    - Painters, etc., ..... 321
  - Blair county:
    - Carpenters, ..... 208
    - Bricklayers, stonemasons and plasterers, ..... 262
    - Painters, etc., ..... 306
    - Hod carriers, ..... 348
  - Butler county:
    - Carpenters, ..... 230
    - Bricklayers, stonemasons, etc., ..... 273
  - Cambria county:
    - Carpenters, ..... 216
    - Bricklayers, stonemasons, etc., ..... 312
  - Crawford county:
    - Carpenters, bricklayers, etc., ..... 285
  - Erie county:
    - Carpenters, bricklayers, etc., ..... 297
  - Lackawanna county:
    - Bricklayers, ..... 327
    - Painters, ..... 330
    - Carpenters, ..... 333

Page.

Lancaster county:
Bricklayers, ..... 324
Lawrence county:
Bricklayers, stonemasons, etc., ..... 315
Carpenters, ..... 351
Lycoming county:
Carpenters, ..... 339
Bricklayers, ..... 342
Plasterers and painters, ..... 345
Mercer county:
Carpenters, ..... 198
Bricklayers, plasterers and stonemasons, ..... 255
Painters and tinners, ..... 291
Montgomery county:
Bricklayers, ..... 324
Philadelphia:
Bricklayers, ..... 34
Plasterers, ..... 140
Carpenters, ..... 155
Painters, ..... 168
Metal roofers, ..... 177
Plumbers, ..... 186
Pittsburg:
Bricklayers, ..... 134
Carpenters, ..... 192
Stonemasons, ..... 303
Venango county:
Carpenters, ..... 240
Bricklayers, stonemasons, etc., ..... 279
Westmoreland county:
Carpenters, ..... 222
Painters, ..... 246
Bricklayers, stonemasons, etc., ..... 267

C. STRIKES DURING THE YEAR 1894:

The number of strikes, ..... 1
Bituminous strike of January 26th, ..... 1
Great destruction of property, ..... 1, 2
Strike in the Connellsville coke district, ..... 2
Scenes of 1891 re-enacted, ..... 2
Assassination of Chief Engineer Paddock, ..... 3
Number of strikers killed and wounded, ..... 3
Number arrested, tried and sentenced, ..... 3
Another great strike in the Bituminous coal region, ..... 3
Reign of terror, State troops called out, a sudden termination, ..... 3
Arrest and long sentence of some of the strikers, ..... 4
Principal causes of strikes, ..... 4
Estimated loss to employes and employers, ..... 4
Number engaged and involved, ..... 4
Estimated loss in wages from labor disturbances from 1881 to 1894, ..... 4
Important decision of Judge Dallas, ..... 4
Table of strikes during the year, ..... 12

D. MANUFACTURE OF PIG IRON IN PENNSYLVANIA:

For index see synopsis, ..... 1

E. STATISTICS RELATING TO MANUFACTURING IN PENNSYLVANIA:

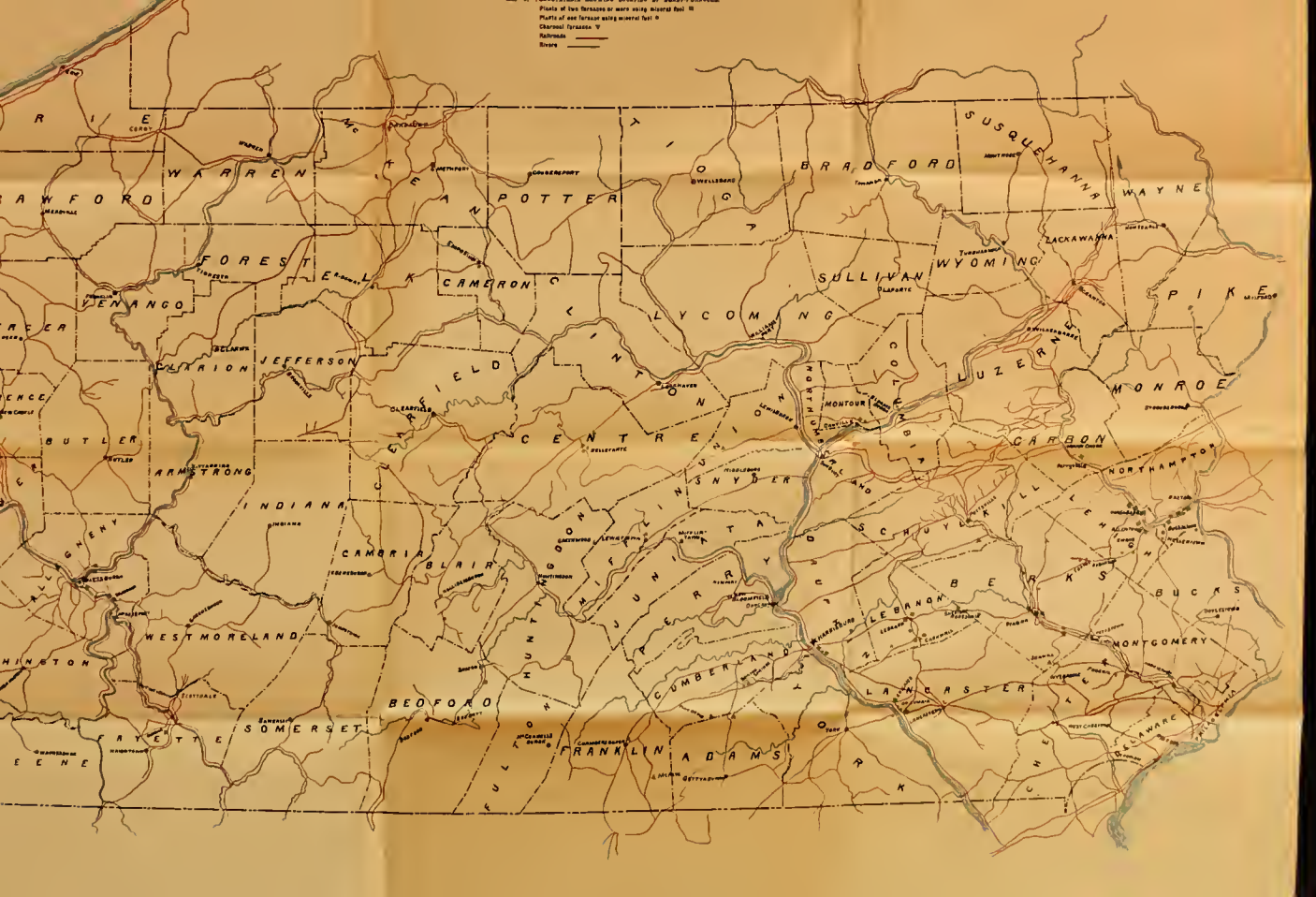
Comparative nature of the work, ..... 1
Decrease in number of persons employed, and aggregate amount of wages paid, ... 4
Decrease in value of product, ..... 4
Trusts and their influence, ..... 2

F. MINE ACCIDENTS:

Average annual production of Anthracite coal per man, ..... 1
Average annual production of Bituminous coal per man, ..... 1
Number of fatal accidents, Anthracite region, ..... 1
Number of fatal accidents, Bituminous region, ..... 1

Page.

Percentage of accidents to number of persons employed, ..... 1
First Mine Inspectors appointed, ..... 2
Anthracite law of 1870, ..... 2
Amendment of 1885, ..... 5
Bituminous law of 1877, ..... 6
No material diminution in the number injured, or the loss of life, ..... 6
A momentous subject, ..... 6
Remarks by inspectors of the different districts, ..... 7
Table of fatalities, ..... 12
The principal causes of accidents, ..... 12
Are Huns and others of their class responsible, ..... 13
A startling charge made by Inspector Thomas, ..... 13
Opinions of Inspectors Blick, Roderick, McDonald, Adams, Williams and Stein on the subject, ..... 13, 25
Ignorance and carelessness perhaps equally responsible, ..... 18
Importance of enforcing stricter regulations as to the employment of incompetent men, ..... 20
Illustration of the unwillingness of miners to take proper precaution, ..... 20
Conclusions deducted, ..... 25


Plants of two furnaces or more using bituminous fuel
Plants of one furnace using mineral fuel
Charcoal furnaces
Railroads
Rivers
WARREN
POTTER
TIOGA
BRADFORD
SUSQUEHANNA
WAYNE
FOREST
ELK
CAMERON
SULLIVAN
WYOMING
LACKAWANNA
PIKE
VENANGO
CLARION
JEFFERSON
CLINTON
LYCOMING
LUZERNE
MONROE
BUTLER
ARMSTRONG
CENTRE
SNYDER
CARBON
NORTHAMPTON
INDIANA
CAMBRIA
BLAIR
SCHUYLKILL
BERKS
BUCKS
WESTMORELAND
LEBANON
MONTGOMERY
BEDFORD
LANCASTER
SOMERSET
FRANKLIN
ADAMS
DELAWARE